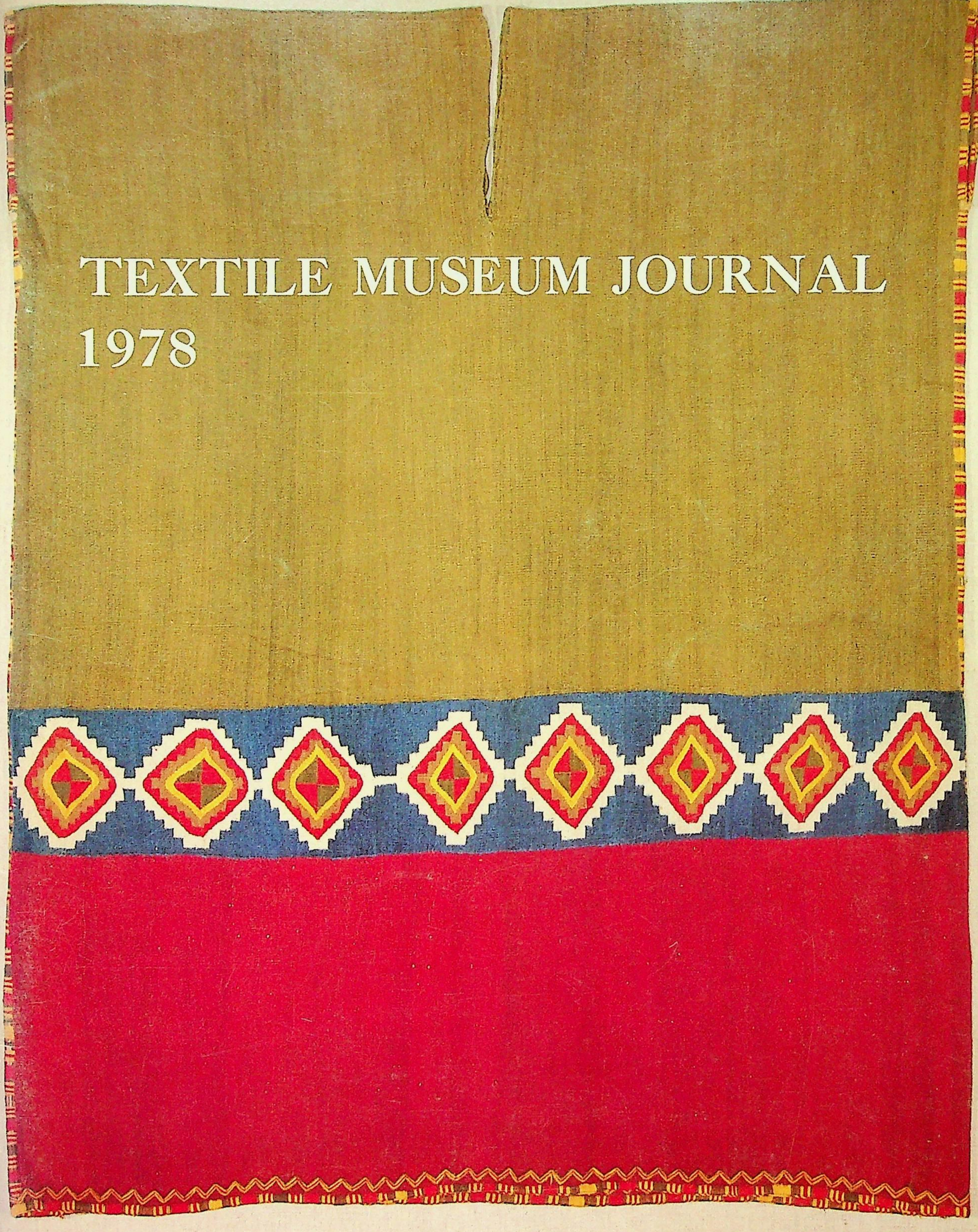
TEXTILE MUSEUM JOURNAL
1978



CONTENTS

TECHNICAL FEATURES OF INCA TAPESTRY TUNICS 5
Ann Pollard Rowe

CARPET COLLECTIONS OF THE PHILADELPHIA MUSEUM OF ART 29
Charles Grant Ellis Spanish, Mamluk

KASURI: A JAPANESE TEXTILE 41
Mary Dusenbury

COVER: Inca tunic with diamond band design. Interlocked tapestry weave, cotton warp, alpaca weft and embroidery. Peru, Late Horizon (1476–1534). 97 x 77 cm. Textile Museum 1977.35.10. Anonymous gift.

The views expressed by the authors are their own: they do not necessarily reflect those of the Textile Museum.

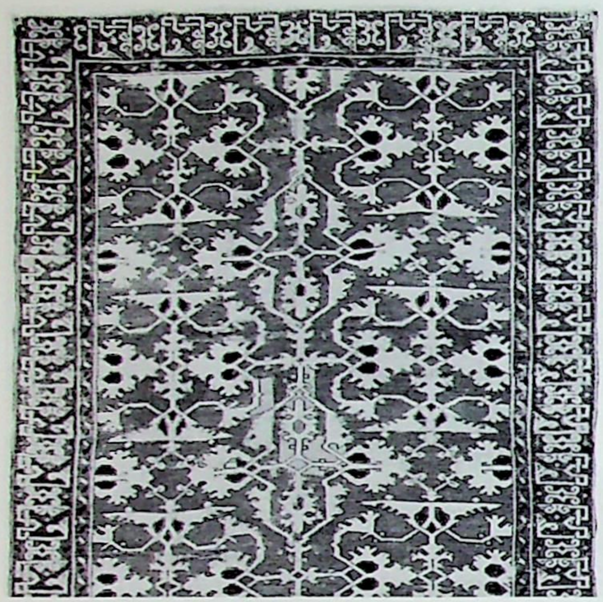


Fig. 22 Lotto Rug, Anatolia, Philadelphia Museum of Art 67-30-308. Samuel S. and Vera White Bequest.

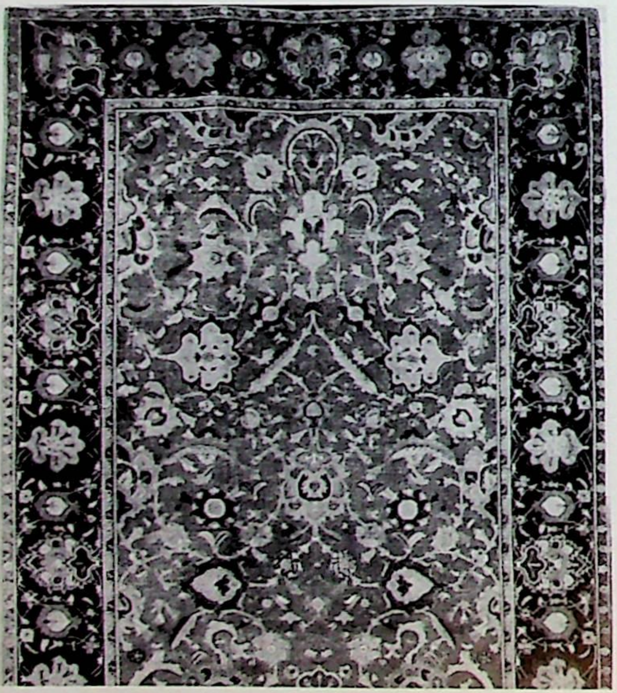


Fig. 24. Vine Scroll and Floral Carpet (Detail), Agra, India. Philadelphia Museum of Art 1977-167-1142. C. O. von Kienbusch Bequest.

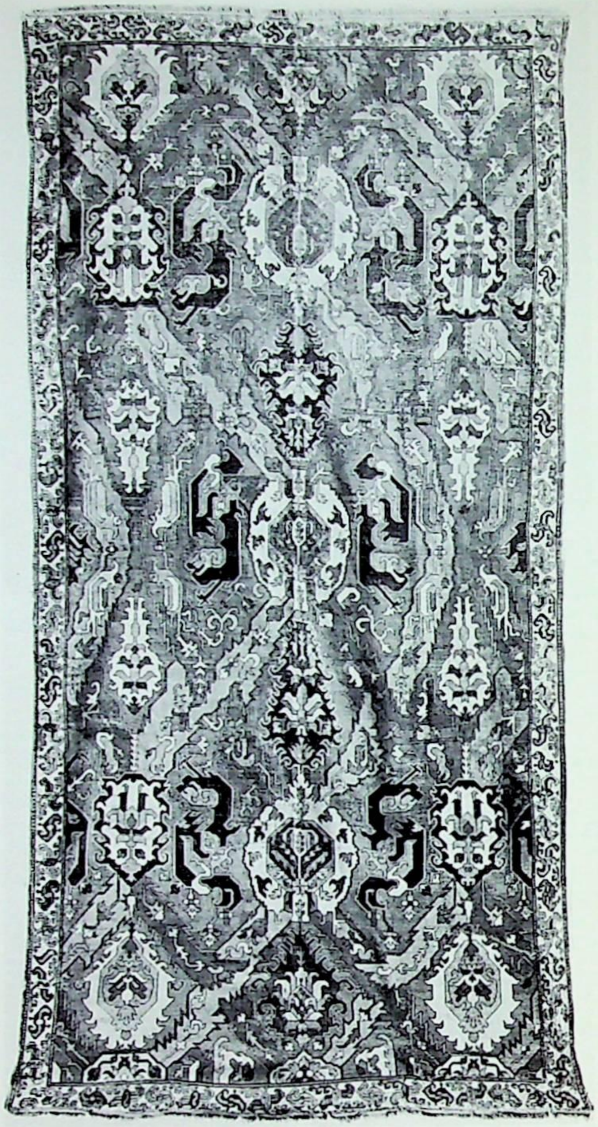


Fig. 23 Dragon Rug, Southern Caucasus. Philadelphia Museum of Art 48-83-1. Philip M. Sharples Memorial Gift.

KASURI: A JAPANESE TEXTILE

MARY DUSENBURY

INTRODUCTION

The word *kasuri* brings to mind the lovely indigo-blue and white cotton patterns familiar in traditional rural costume in Japan. It may be somewhat surprising, therefore, to learn that neither cotton nor kasuri were commonly used in Japan until the middle to end of the Edo period (1603-1868), so that the tradition of cotton kasuri as it is known today is little more than 150-200 years old. This is not to say that kasuri was not produced at all before this time. Warp kasuri was woven in the Ryukyus as early as 1372, primarily from *basho* (banana fiber) and ramie; Ryukyu kasuri found its way to Japan at the end of the sixteenth century, where it was used for the stylish *kosode* garments of the ruling military aristocracy. Although kasuri seems to have been woven in some parts of the country by the end of the seventeenth century, it was not until the latter half of the eighteenth or the beginning of the nineteenth that it became thoroughly assimilated and popular.

Kasuri is a word used in Japan to denote cloth in which warp and/or weft yarns have been partially resist-dyed before weaving in such a way as to produce, when woven, a predetermined pattern in the finished cloth. More specifically, it refers to a group of textiles, generally of *asa* (hemp or ramie) or cotton, with certain typical patterns, most of which were developed during the Edo period. Thus it refers primarily to a certain type of cloth rather than to a technique. There are a number of fine examples of thread-resist-dyed textiles in Japan that are not classified as kasuri and, in fact, are in no way classified together at all. Because this study gives some attention in a fairly broad way to the emergence and development of thread-resist-dyed textiles in Japan, the widely known Indonesian word *ikat* will be used as a technical term to refer to the thread-resist technique itself, and particularly to those thread-resist-dyed textiles that are not classified as kasuri within Japan. Although there are some obvious difficulties in this, a special "redefinition" of kasuri would create even more.

The word kasuri was first used in the early Edo period to refer to ikat cloth entering the country from Okinawa. This cloth was called *kashiri* on the southern Ryukyu island of Yaeyama, and it is quite probable that kasuri is a modification of this old Ryukyuan word. It is also phonetically related to a number of words that well describe the visual effect of ikat patterns. *Kasuru* means to graze, abrase, or blur; *kasureru* describes the hazy beginning and end of a calligraphic brush stroke; *kasumeru* means to skim or brush lightly; and *kasumi* refers to mist and haze. Like so many other Japanese textile words, the term refers to the pattern of the finished fabric rather than to the technical means employed to produce it. Certainly its phonetic associations all suggest the subtle shading-off of the kasuri pattern into the background fabric.

The history of ikat weaving in Japan (not including the islands of Okinawa, which will be referred to collectively by their old kingdom name of Ryukyu) can be roughly divided as follows:

Early examples of thread-resisted weaving and braiding that predate, are quite different from, and seem to have had little or no influence upon the subsequent development of kasuri weaving as it is known today. These include a few early and isolated imports of elaborate polychrome warp ikat used for Buddhist ceremonial banners in the seventh and eighth centuries, braids worked with resist-dyed elements dating from the ninth-eleventh centuries and the first simple block-patterned warp ikats for *kosode* (older form and name of *kimono*) and noh costume, the earliest of which probably dates from the mid- to late Muromachi period (1336-1568).

The development of ikat weaving (warp, weft, and double) in the Kingdom of Ryukyu, beginning in the fourteenth century, and its introduction to Japan in the late sixteenth.

The beginning of kasuri weaving in Japan, primarily as a result of contacts with Ryukyu. These textiles were probably first woven by artisans attached to local *daimyo* (feudal lords).

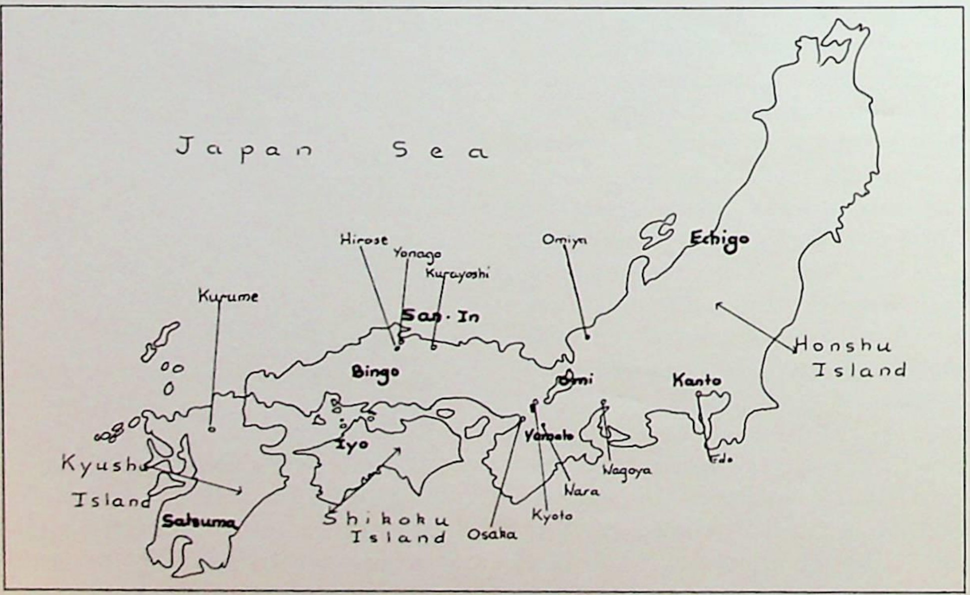
In the latter part of the seventeenth century and beginning of the eighteenth, asa kasuri became fashionable also among well-to-do merchants in the cities and towns. Much of the demand for these textiles was met by farm women weaving kasuri as by-employment for sale to the cities.

The middle to end of the eighteenth century saw the wide-spread popularization of kasuri. The ready availability of cotton and the growing market economy both stimulated cotton weaving of all kinds, and cotton kasuri kimono were worn by all alike. Some kasuri cloth was woven by households for their own use, but the latter part of the eighteenth and early nineteenth centuries also saw a rapid development of specialized household industry, and large amounts of cotton were processed and kasuri woven in rural areas for sale to the cities. This was probably the period of kasuri's greatest development—the period in which it became a common textile throughout the country, and in which it developed particular local characteristics as well.

The nineteenth and early twentieth centuries saw the development of ever more complex and demanding patterns, a proliferation of technical innovations, and the growth of small hand-industrial kasuri factories. In the middle and later twentieth century there has been a decline in many of these hand-industrial techniques and workshops, as modern factories have succeeded in applying some of the most modern cloth-dyeing techniques to yarns before weaving. Since the end of World War II there has been a resurgence of interest in the old hand techniques, and a revival of the simplest and most useful technical innovations (such as the *e-dai*—see technical notes). Today, a skilled kasuri weaver can make a respectable living from his craft, although his products are usually much too costly to be used for the kasuri clothing still worn by farmers, and women peddlers, who generally rely on ready-made garments of factory-produced blue-and-white kasuri cloth.

EARLY IKAT TEXTILES IN JAPAN

Three distinct types of ikat textiles predate the Edo period development of kasuri weaving. These are the famous fragments of *kantokin* (Canton polychrome), dating from the Asuka and Nara periods (mid 6th-8th centuries); the ikat-dyed plaited ceremonial sashes called *hirao*, early examples of which have survived from the Heian period (ninth-twelfth centuries); and the block-patterned warp-ikat *shimekiri* of the Muromachi period (1336-1568), which has been preserved in the tradition of costume for the noh drama. Although these textiles seem to have had little direct connection to the main stream of kasuri weaving, they are interesting and important, well deserving of mention in their own right.



Kanto-Kin

The earliest extant examples of ikat in Japan are fragments originally donated to the Horyuji and Todaiji temples in Nara. (The former are now housed in the Tokyo National Museum and the latter in the Shosoin Repository in Nara.) Collectively called kantō-kin (or *kantō nishiki*), these textiles reached Japan at a time when the great T'ang Dynasty of China (618-907) held sway over a vast dominion extending, at the height of its power, from beyond the Western Hindukush Mountains to the Pacific. Across this vast expanse a steady flow of people and goods found their way through the oases of central Asia along the ancient Silk Road. It was a period of great international communication and when, in 752 A.D., the Great Buddha of the Todaiji was ready for dedication, priests came from as far away as India to attend the ceremonies. The Horyuji and Shosoin Repositories are filled with treasures from this period, often with the date and occasion of acquisition carefully noted in the temple records. At the time, however, little attempt was made to determine the original provenance of an object. Probably, this was often unknown, owing to the flow and intermixture of styles and objects as they wended their way eastward from India, Turkestan, and even further West, through the great Chinese Empire, to Japan.

Although the name kanto-kin, which means Canton polychrome, might seem to indicate a south China origin, this is unlikely. The naming of this cloth, as of others, probably had to do with the last port of call before the cloth reached Japan, rather than representing any real attempt to locate its origin. (These fragments are sometimes also referred to as *taishi kando*, "stripes" of the regent and great Buddhist patron, Shotoku Taishi—a name given many hundreds of years later in the Edo period.)

The fragments, similar to one another, are elaborate, polychrome silk warp ikat with rather abstract patterns of curved lines reminiscent of various West Asian and Southeast Asian human figure motifs. Yamanobe Tomoyuki formerly of the Tokyo National Museum[1] gives a good description of one of these textiles. This taishi kando fragment is particularly important because it is the earliest extant example of ikat in Japan, as well as being the only fragment to contain a complete pattern repeat.

Among the textiles in the Horyuji Temple, there are two types called "kanto." The first has a plain weave background with the pattern executed by weft floats. The second is this multicolored warp ikat —the so-called "taishi kando" remnants. These textiles are so fragmented with age that it is impossible to see their original form, but there are remains not only of a "shoban" (small banner for Buddhist ceremonies), but of a "daiban" or large banner as well. The thickness of the threads and warp and weft count vary according to the fragment, and the five or six extant fragments range from relatively rough-textured ones to smooth and comparatively thin ones. Most of these fragments are in very poor condition, and this is the only one showing one complete pattern repeat (Fig. 1).

The background is red, with yellow and light blue as the other two basic colors, and smaller amounts of green and purple obtained by mixing the former primaries. Natural white is also used. The pattern is executed by warp ikat. Although the fabric is woven in plain weave, the warps are much denser than the wefts (warps approximately 50/cm and wefts 20/cm). Thus the wefts are almost completely hidden under the warps, and create horizontal furrows on the surface. The edges of the ikatted sections are very distinct— not at all blurred or fuzzy.

The pattern is a rather abstract one of curved lines, and there are various explanations regarding it. Recently, among foreign scholars, it has been postulated that the pattern represents human figures with outstretched legs, a 7-pointed crown and earrings. Seen thus one can see a connection to the silk warp ikat of Turkestan. A resemblance can also be seen to the stylized human figure patterns of Indonesia and other South Pacific areas. Actually, however, not enough of the textile remains even to determine for certain whether these abstracted designs all represent human figures and, for the present, this problem, and the clue it holds to the textile's provenance, must await further study.[2]

The question of provenance is intriguing as these fragments are probably the oldest

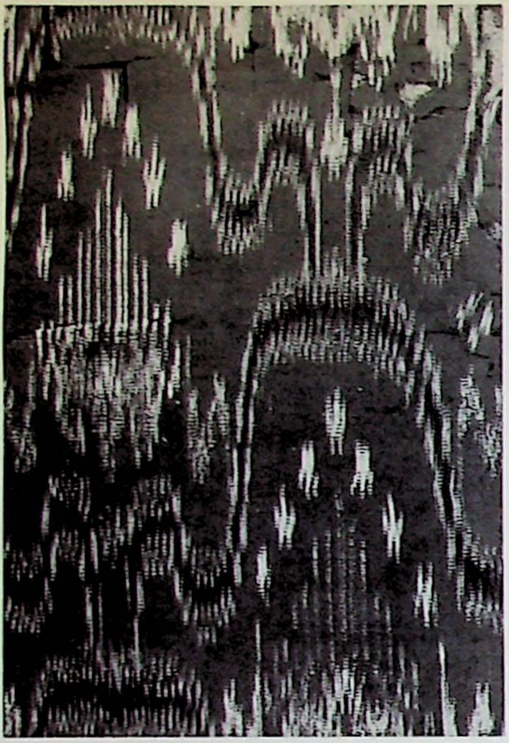


Fig. 1 Kanto-kin. One of a series of fragments of multicolored silk Buddhist banners executed in warp ikat and imported to Japan, probably from West Turkestan, during the 7th and 8th centuries A.D. Horyuji collection, Tokyo National Museum.

extant ikat pieces known. Some scholars, such as Carl Schuster,[3] consider that this textile came to Japan from West Asia, possibly Turkestan, whereas many Japanese scholars (including both Yamanobe Tomoyuki and the staff of the Textile Color Design Center in Osaka) are more impressed by affinities to certain textiles from Indonesia and other islands in Southeast Asia. Although similarities exist to textiles of both regions the arguments are difficult to evaluate on this basis alone because both the silk warp ikat of Turkestan and the cotton warp ikat of eastern Indonesia and western Philippines to which they have been compared are of a much later date. The earliest known examples from both regions were probably produced more than a thousand years after the kantō-kin.

The extensive traffic and large number of articles from Persia and other parts of West Asia that travelled along the ancient Silk Road through China would seem to favor the former hypothesis even though the techniques and motifs that appear to have been used in the kantō-kin seem radically different from those of other West Asian textiles of the period (at least those in the Horyuji and Shosoin collections). On the other hand, whatever trade existed between the islands of the South China Sea and Japan during this period remains largely undocumented and there are no artifacts from this area in either of the two collections. Nevertheless, the similarity of the kantō-kin to a number of warp ikats of Borneo, Mindanao and the Celebes is striking. The anthropomorphic, linked figure motif found on these textiles is also found on pottery excavated in the Celebes and in Thailand suggesting that the motif itself was used in the region for a long time and was once probably widespread. Ikat had an old and quite varied tradition throughout Southeast Asia and the name kantō-kin itself suggests a southern origin linking the textile with the port city of Canton. Thus the possibility that the kantō-kin were produced somewhere in this cultural area would seem to merit careful investigation. If they were, they could easily have found their way to Japan through the ancient kingdom of Champa, an Indicized state which had maintained tribute relations with China since the second century A.D. The seafaring people of Champa had linguistic and other ties to Indonesia and their location along what is now the east coast of Vietnam made it a likely point of contact between the islands of Borneo and Mindanao and the continent. Several fine artifacts (though not textiles) now preserved in the Shosoin are known to have come from Champa; from there also came Fo-che (Bottetsu in Japanese), one of the most well-remembered priests in attendance at the Dedication Ceremony of the Great Buddha in Nara in 752 A.D.

Of course it is also possible that the motif found on these Southeast Asian warp ikats, if not the technique itself, was transmitted to the islands from some ancient West Asian ikat center either through the Indian subcontinent or along the ancient sea thoroughfare linking West Asia with South China through the Persian Gulf. Whatever the answers to the intriguing question of provenance, these fine warp ikats seem to have been isolated examples of a foreign textile that came to Japan without bringing with it the technical knowledge or arousing the interest to spur the development of ikat within Japan itself. References, illustrations, and actual examples of ikat cloth are completely lacking for at least six hundred years after the great T'ang Silk Road fell into disuse—that is, until the shimekiri kosode of the Muromachi and Momoyama periods (1336-1603). Nevertheless, an ikat-dyed plaited sash apparently entered Japan from China—probably accompanied by craftsmen capable of producing it—at about the same time as the last of the kantō-kin. This hirao, as it was called, was used extensively in the Heian period (794-1185), and has continued to be used for certain ceremonial events up to the present time.

Hirao

The hirao was an article of court ceremonial dress copied from Chinese court costume of the T'ang period. It is a wide, flat ikat-dyed plaited silk sash that is worn hanging from the front center of the waist to a little below the knees. In Japan, the technique is called *karagumi,* which merely means Chinese-style braiding. In Irene Emery's terminology, the technique probably would be called paired oblique twill interlacing. It is worked with pairs of rather heavy silk cords, and the ikatting technique is used very simply to produce fairly large blocks of color as background for intricately worked central and border designs (Fig. 2).

These ikat-dyed plaited sashes were used not only for ceremonial court costume and as decorative adjuncts to the vestments of priests, but also as part of the costume of the Bugaku dance, an ancient dance form with Chinese roots that is associated with the Imperial Household and the Court. Hirao are still used today, but are extremely time-consuming and costly to produce. Although there are a number of craftsmen who understand the process, and many who braid simpler karagumi pieces, Japan suffered a real loss a few years ago when the last great master braider of hirao, Jusuke Fukami, died.

Noh Costume

The noh drama was developed and perfected during the Muromachi and Momoyama periods (1336-1603), supported by the rising military class. Among the noh costumes that have been preserved from this period are examples exhibiting the use of a simple warp ikat to produce large blocks of background color—wide horizontal bands of solid color with bleeding at the edges effected by the hazing off of one of the warp blocks into the next.

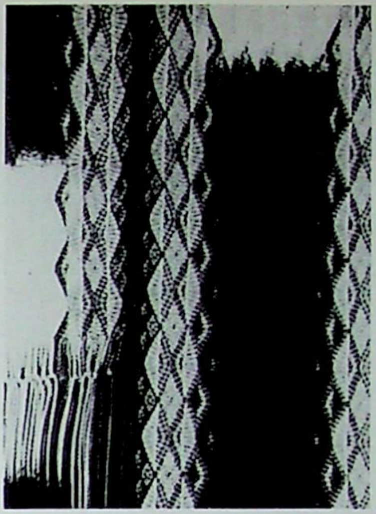


Fig. 2 Hirao. A wide flat-plaited sash with block-patterned background color executed by thread-resist dyeing. Copied from Chinese court costume, the earliest examples in Japan date from the Heian period (9th–11th centuries). Silk. Braided by Jusuke Fukami. National Commission for the Protection of Cultural Properties. Photograph courtesy of Sugimura Tsune.

Within the tradition of costume for the noh, this simple warp ikat has continued to be used from its inception in the sixteenth century through the Edo and Meiji periods up to the present. It has generally been used as a background for a variety of different weaving techniques and supplementary surface techniques such as embroidery. Two of the costumes with which it is most closely associated are the rung-patterned (*dan-gawari*) shimekiri and *noshime,* although it is sometimes employed on others as well.

Although the technique seems always to have been considered a background one, and although, as ikat, it is a comparatively straightforward technique, the results are esthetically effective. In some rung-patterned costumes, the large, bold bands of color are offset by the gentle hazing of the edges. In others, the technique is used to produce a complete change of mood from one area of the garment to another, as in an Edo period noshime costume (now owned by the Tokugawa Museum in Nagoya) in which a sophisticated design of small checks in white and blue is broken in the center of the garment by a wide band of blue, red, and yellow horizontal stripes (Fig. 3).

Noh costumes were initially modest, but as the drama attracted the attention and patronage of the wealthy and powerful samurai class, its costumes increasingly reflected the stylish attire of its audience. Occasionally a

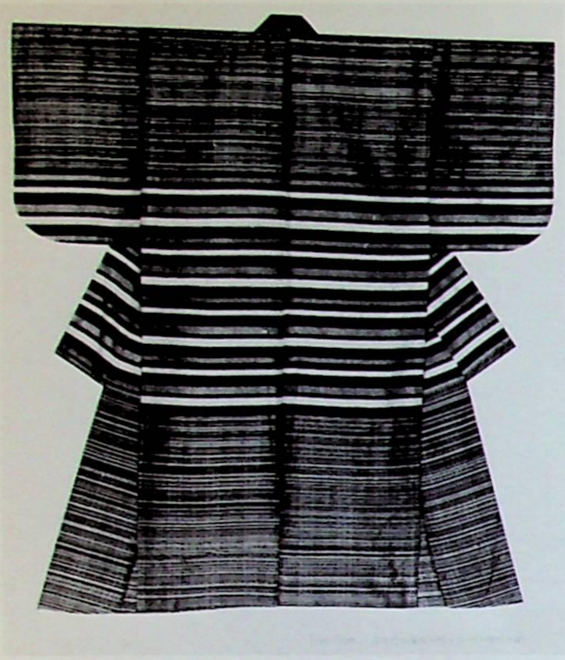


Fig. 3 An Edo period Noshime costume with design of small blue and white checks broken in the middle by multicolored weft-way stripes. Warp ikat. Silk. 17th or 18th century. Tokugawa Art Museum, Nagoya.

patron, entranced by a particularly fine performance, took off an outer garment and dramatically donated it on the spot to the leader of the noh players. The leading schools of noh today still cherish a few beautiful garments said to have been donated by a military aristocrat more than three hundred years ago. Even after the drama was well established and able to produce elaborate costumes of its own, it still continued to adhere to the style and taste of its original patrons. One can perhaps assume, therefore, that this particular use of warp ikat was originally a technique and pattern used for affluent military and later merchant families of the Muromachi or at least the Momoyama period. Examples of non-theatrical rung-patterned noshime from the Edo period and the recent discovery of a particularly fine warp-ikat brocade kosode, that has been in the possession of an old Kyoto merchant family since their Momoyama period ancestors first wore it, serve to corroborate this hypothesis. The Momoyama kosode is a lovely garment, and the warp ikat is executed in a highly sophisticated fashion suggesting that when it was woven the technique had already been in use for some time (Fig. 4).

It seems fairly clear that the shimekiri was originally a popular garment among fashion-setting Muromachi period samurai. Its origins, however, still remain somewhat obscure; the warp ikat employed to produce its background blocks of color has no apparent connection to any contemporary, preceding, or later use of ikat weaving in either Okinawa or Japan. Some writers believe that the shimekiri may have been inspired by contemporary and slightly older patchwork garments made of a composite of patches of rare, treasured bits of fabric (*meibutsugire*) imported from China, Southeast Asia and India. Were these rung-patterned garments first developed as a cheap imitation of the more costly patched ones? The warp ikat employed to create differing blocks of background color is straightforward enough that an enterprising weaver could have devised it on his own. I have also been struck, however, by the resemblance of these robes to the old hirao braided sashes in use at least since the Heian period. A simple thread-resist technique is employed in both to achieve large blocks of color used as a visual background for intricately worked braided or woven patterns. The

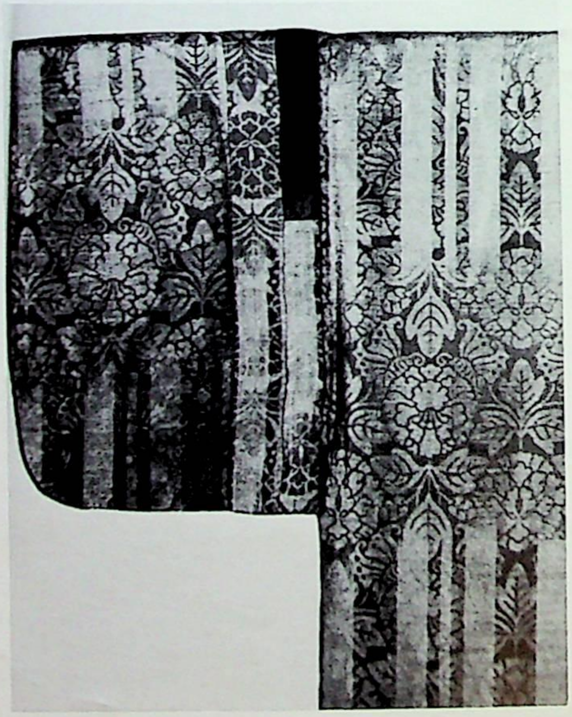


Fig. 4 Detail of a recently "discovered" Momoyama period (late 16th century) warp ikat brocade *kosode* owned by an old Kyoto merchant family. The warp ikat is executed in a highly sophisticated fashion suggesting that when it was woven the technique had been in use for some time. Silk. Held in trust by the Kyoto National Museum.

final surface in both was sometimes further embellished with embroidery. A master weaver in Kyoto seeking to imitate the effect of the patched garments might well have been impressed by the possibilities of the warp ikat technique used by the hirao braider. Both worked in the small and closely interconnected world of the capital and it was common practice for textile craftsmen (dyers, weavers, embroiderers) to imitate each others' work.

As costume gained ever greater importance in the noh drama, styles, patterns and techniques as well as actual garments were carefully preserved. Thus the rung-patterned shimekiri (and its Edo period noshime successor) continued to be refined and developed in the noh long after it had disappeared as non-theatrical costume. However, it had little or no influence on the development of ikat in Japan apart from the noh. Undoubtedly one reason for this was that these robes were of silk whereas most kasuri was woven first of bast fibers and later of cotton. The two latter formed a separate tradition and were woven by quite different types of weavers than those who worked in silk.

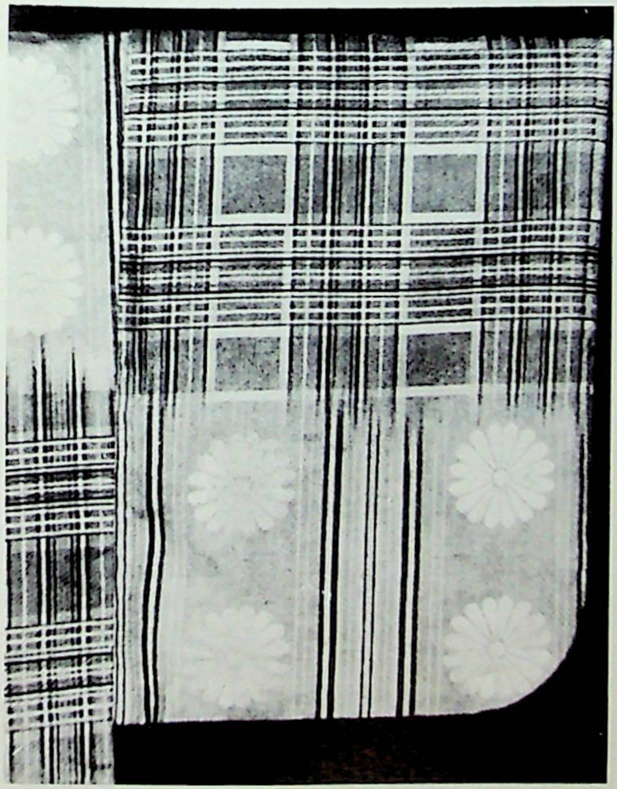


Fig. 5 Detail of an Edo period Rung-patterned costume. Warp ikat. Silk, 17th or 18th century. Tokugawa Art Museum, Nagoya.

THE DEVELOPMENT OF RYUKYU KASURI AND ITS INTRODUCTION TO JAPAN

History

During the fourteenth and fifteenth centuries the kingdom of Ryukyu had much contact with Southeast Asia and with China. This period saw the introduction not only of ikat, but of most of the other weaving and dyeing techniques that formed the basis for the beautiful textiles for which Ryukyu was to become justly famous. In this period, ikat probably entered the country in two different ways: through textiles sent as gifts or tribute by the rulers of various southern kingdoms to the Ryukyu king; and through skills learned on the spot by Ryukyuan sailors on their lengthy journeys throughout Southeast Asia.[4] The materials used at that time were primarily basho (a fiber of the *Musa basjoo*, a species of banana tree), karamushi ("China grass" or ramie), and probably some other bast fibers as well. Various documents from the period attest to the importance of these fibers and to the absence of cotton and silk.[5]

In 1609 the lord of Satsuma, the fiefdom at the southern tip of the westernmost Japanese island of Kyushu, invaded Ryukyu and demanded yearly tribute from it as a sort of vassal state. This tribute, apart from rice, included 3,000 *tan* (one tan is enough material to make one kimono, 11-13 meters by approximately 37 centimeters) of basho cloth (*bashofu*), 6,000 tan of Ryukyu *jofu* (good quality bast), and 10,000 tan of *kafu* (poor quality bast). Many of the woven goods were apparently ikat-dyed, and these ramie and banana-fiber textiles gained such great popularity among the wealthy military families of Japan that soon the first kasuri began to be produced in various parts of Japan. Development continued to be stimulated by the yearly tribute textiles and trade imports from Ryukyu, and later probably by trade with other ikat-producing Southeast Asian countries as well.

The tradition continued to flourish in Ryukyu, both for domestic use (from peasants to kings) and to meet the demands of the yearly tribute to Satsuma. From the fifteenth century on, under a policy of government encouragement of the crafts industries, new fibers were introduced to Ryukyu, generally, from Japan. In 1611 cotton was first cultivated with seeds imported from Satsuma, and in 1619 silkworms were introduced. Many of the loveliest and most highly prized of the Ryukyu ikats were still made, however, with ramie and other bast fibers and with basho, or banana fiber.

Dyeing Techniques

Ryukyu is a land rich in natural dye resources, not the least of which is a pure hard water supply and, in certain parts of the islands, iron-rich mud. Lovely clear colors for kasuri were obtained from barks and roots and the flowers of native plants, including: Ryukyu indigo, Indian indigo, water pepper, *fukugi* (*Garcimia spicata*), momokawa (*Myrica rubra*), tekachi *(Rhaphiolepic umbellata)*, *kuru* (Kioscorea rhipogonioides), Sakishima *suo* (*Heritiera littoralia*) and *benihana* (*Carthamus tinctorium*).[6] Momokawa is the bark of a species of wild peach, suo is more commonly known to us as sappanwood, and benihana is safflower.

The main method of dyeing was *tsukezome*, vat dyeing, except on the southern Yaeyama Island, where red threads were apparently dyed by repeated rubbings with the root of the *koro* (*Droseorea rhipogonoides* oli.), a technique now called *surikomi* and used in other parts of Okinawa and Japan as well, often to facilitate the addition of a third color without completely retying the threads.

Weaving Techniques

Ryukyu weaving techniques are not complicated. There is a simple form of pattern weaving, *mon-ori*, which gives raised-surface patterns somewhat similar in effect to "m's and o's." Apart from this, almost everything is made in plain weave (*hira-ori*) with patterns of stripes, checks, and kasuri.

Although kasuri techniques included warp, weft, and double ikat, they were simple compared to the elaborate methods and patterns that later evolved within Japan. There were two basic methods of planning and weaving the designs:

hikizurashi (slide-pulling): Warps or wefts previously resist-dyed in uniform-length areas are slid into position to form not only geometric motifs, but more or less graphic-style ones containing curves and producing such patterns as flowers and birds

haba-awase (adjusting the width): this, of course, is probably the oldest and most widespread of ikat techniques, and involves planning the areas to be tied to accord as exactly as possible with the areas to be left reserved in the woven pattern.

For both these methods, yarns were hand-tied prior to dyeing; but there is one more method used, *orijime*, perhaps first developed in Ryukyu, which eliminates hand-tying.

Orijime

This method uses a disposable, heavy warp which is then woven with a fine "weft" yarn, dyed in the piece, taken apart and the mottle-dyed "weft" yarn is used as warp with a new fine weft. The result is a fabric with subtly mottled vertical stripes (or horizontal ones, if the weft is again used as weft but with a new warp).

This technique has recently been fully exploited to produce polychrome patterns of extraordinary freestyle complexity by exploiting the possibilities of selectively spacing the disposable warp and then, in the subsequent series of dyeing processes, selectively cutting away further sections of this resist fabric—each producing warp (or weft) for only one pattern—to finally produce the great number of differently dyed threads necessary to weave one piece. Of course one has then produced enough warps of each pattern to weave many identical kimono lengths. This so-called *Amami Oshima tsumugi* (spun silk floss from the island of Amami Oshima between Japan and Okinawa) uses expendable gassed cotton warps for the resist. The dyes are lovely, and include rich shades of brown from the Sharinbai tree and the iron-rich mud of the island; but the designs are a bit of a disappointment. Perhaps in an effort to make a place for these very expensive textiles in the heady market atmosphere of Japan proper, too many and too ornate designs were developed too quickly. At any rate, the contemporary designs share little of the subtle, understated beauty of their forebears.[7]

Until comparatively recently, Okinawan kasuri was woven on simply constructed back strap looms. These looms, called in Japan *izari-bata*, have a loom-frame or stand, backbeam, harnesses, and reed/beater, but the front beam is tensioned by a strap encircling the weaver, who sits on a low board in front of the loom.

Textile Names and Patterns

From the fourteenth century, when ikat techniques entered the country from Southeast Asia, until kasuri was exported to Japan in the late sixteenth century, a distinctive body of patterns seems to have developed in the Ryukyus. Their origins are obscure, but many bear a marked resemblance to tattoo markings seen, for instance, on the hands of elderly women. These old human decorative motifs may well have been one source of inspiration for the markings later to be so closely associated with kasuri textiles.

Although little really old cloth or documentation exists to help in tracing the development of Ryukyuan kasuri design elements, a set of albums, called the *Mi-ezu-cho*, from the late eighteenth or early nineteenth centuries, contains artists' renditions of what may be called a complete inventory of contemporary Ryukyu kasuri patterns (Fig. 6). The *Mi-ezu-cho* were made by artists in the royal court at Shuri, and distributed throughout the country to be used as guides in dyeing and weaving the required tribute textiles. These patterns were generally geometric constructions featuring straight lines and simple curves, and included arrows, clouds, stars, birds, and flowers, often combined with plain stripes or checks.

By the nineteenth century, Japanese kasuri weaving was well established in its own right, and the two traditions, despite mutual influence, had become quite distinct. Here is a description of Ryukyu kasuri of this period, seen through the eyes of the Japanese authors of the standard work *Textile Designs of Japan*:

> Instead of the ambitious elaboration of the Japanese kasuri weaver who, after long struggles to weave as nearly free-style designs in the *kasuri* technique as possible, finally invented the *e-gasuri* method (see technical notes), the *kasuri* weaver in Ryukyu confined himself to primitive techniques by means of which he created a rich variety of patterns that are remarkably fresh and powerful, though naive.[8]

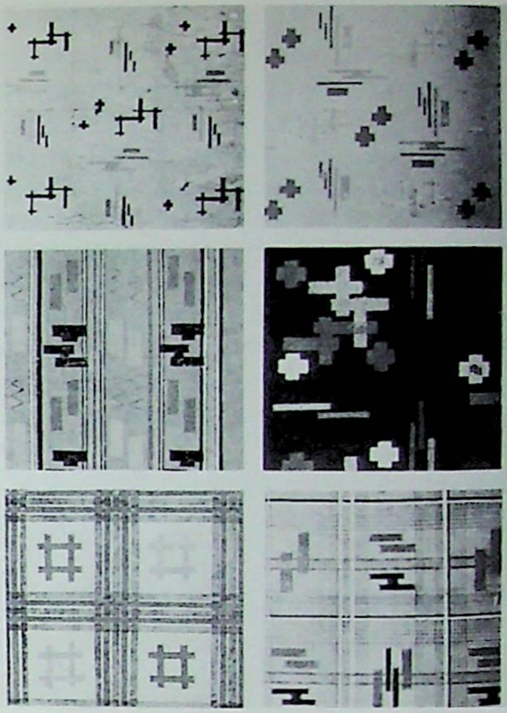


Fig. 6 Multicolored *kasuri* patterns from the *Mi-ezu-cho,* pattern books drawn by artists in the Royal Court in Shuri and distributed throughout the Kingdom of Ryukyu as a guide in weaving the required tribute textiles. Okinawa Prefectural Museum, Shuri, Okinawa.

Naive is perhaps not quite the right word, as it implies a true folkishness that some Japanese rural textiles had but Okinawan textiles seldom did. For all their simplicity, these were sophisticated garments, and one must remember, with the master Okinawan *bingata* dyer, Kamakura Yoshitaro, that:

> The fine handcrafts of post-invasion (1609) Ryukyu were produced under strict governmental surveillance for two markets. On the one hand, they were destined to be shipped overseas as tax and tribute payments or export commodities; on the other hand, they were sold on the domestic market for consumption by the landed gentry. Produced to conform to a standard of superior skill, they lack the naive clumsiness of folk art elsewhere. This is true not only for lacquer ware and woven and dyed goods, but for all kinds of Ryukyuan handcrafts.[9]

Kasuri is still woven on Okinawa. Although many of the old masters were killed during World War II, remote hamlets still exist where serious weavers from other parts of Okinawa and even from Japan go to learn traditional techniques. Other weavers are attempting to revive the skills of their ancestors without the benefit of supervision, but always with the inspiration of the old cloth.

THE DEVELOPMENT OF KASURI WEAVING IN JAPAN

During the Momoyama period (1568-1603), Ryukyu kasuri cloth began to enter Japan in significant amounts, and the Satsuma invasion of 1609 and subsequent "land tax" imposed on the Ryukyu people included large quantities of kasuri cloth as well as other Ryukyu textiles. Because the patterns and colors of this kasuri appealed strongly to current Japanese esthetic sensibilities, the textiles soon gained great popularity within Japan, not as foreign exotica but as material suitable for kosode, a garment similar to the contemporary kimono and worn by both men and women alike.

Kasuri weaving in Japan is best known as a textile for the *shomin* or common people, but in this early period it was primarily worn by members of the ruling *buke,* or military houses (upper samurai class), who preferred its simple designs to the ornate patterns and heavy brocades worn by the somewhat effete court aristocracy. The great popularity of these Ryukyu kasuri textiles among the leading military families soon stimulated production within Japan itself. It is not known who produced the first kasuri within Japan, but it is probable that professional weavers, attached to the households of powerful military lords, were among the first to do so.

Diffusion of Kasuri Cloth and Weaving Techniques Within Japan

Until recently, Japanese and Western scholars alike believed that kasuri weaving spread in a logically consistent fashion from Satsuma in southern Kyushu, up through Kyushu to the famous kasuri weaving center of Kurume, to Shikoku and the western parts of Honshu, and thence throughout the rest of Japan. Jaap Langewis states:

> It has definitely been established that the impetus responsible for the development of ikat production as a folk art in Japan originated in the Ryukyu Archipelago, where the technique flourished on the Islands of Miyako and Okinawa, as early as the seventeenth century. By way of Kagoshima (Satsuma), the prefecture in the southern part of the Japanese island of Kyushu, and the . . . town of Kurume (in northern Kyushu), the ikat technique spread throughout the whole of Japan.[10]

In this statement, Langewis seems to be reflecting informed Japanese opinion of the 1950's, but more recent scholarship and careful examination of local documents have shown not only that ikat was well established in Ryukyu at a considerably earlier date, but that the pattern of diffusion within Japan was considerably more complex and at first seemingly arbitrary. It appears that one of the first places within Japan to produce kasuri to any great extent was the province of Echigo, where asa kasuri was apparently first woven in the early 1660's. This was followed in the first half of the eighteenth century by Nara, Omi, and Omiya and probably certain other hemp- and ramie-producing areas as well. Satsuma, however, was not among the first regions to produce kasuri; and the famous fabric known as Satsuma jofu was not woven in Satsuma at all, but imported from the Ryukyu islands of Yaeyama and Miyako. With so many beautiful Ryukyu textiles readily available, Satsuma had perhaps little need or incentive to produce its own.

Following is a list of some of the major kasuri-producing areas, with the dates of their first production of the textile. The list is taken from the work of Oda Hideo.[11] Other dates, such as those given by Fukui Sadako,[12] occasionally differ by a year or two, but are basically the same.

Area	*Date of First Production of Kasuri*
Ryukyu	1372
Echigo	1661-65
Omiya	1716-35
Satsuma	1740
Kawachi (near Osaka)	1740
Yamato	1751-63
Yonago	1751-63
Omi	1720-80
Murayama, Tokorozawa (Saitama Prefecture on the Kanto Plain near Tokyo)	1781
Kurume	1799
Nagoya	1789-1800
Kurayoshi	1818-29
Hirose	1818-29
Bingo	1861-63

Oda Hideo observes:

> Cotton kasuri originated in Kawachi the same year that it did in Satsuma (1740), and in the fifty-odd years between the

beginning of kasuri weaving in Satsuma and that in Kurume (1799), kasuri weaving started in Yamato, Yonago, and Murayama. The early appearance of kasuri in San-in is perhaps understandable, but its appearance in the Kanto Plain (Murayama and Tokorozawa) in 1781 before its appearance even in Kurume certainly seems to contradict the former diffusion theory.[13]

How can one account for the seemingly arbitrary spread of kasuri weaving, its early appearance in isolated spots like Echigo (1660's), and its comparatively late start in Kyushu (mid-1800's), about a hundred and fifty years after it was first introduced? Local records can of course be misleading, and it is probable that a little kasuri cloth was woven by privately employed artisans attached to the households of wealthy patrons prior to the "date of first production" recorded in local documents. Yet even if these dates are not completely accurate,it seems that one must reexamine the course of diffusion, the types of inter-province links within Japan during the Edo period, and perhaps even sea contacts as well. During the Edo period (1603-1868), the country was all but closed to foreign trade. and there were many and detailed government prohibitions on travel between provinces. Recent scholarship by social, political, and craft historians alike has tended to show, however, that there may have been a great deal more inter-province communication and perhaps even outside sea communication (at least with Southeast Asia) than has previously been accounted for. If some of this interchange circumvented Tokugawa law, certain forms, such as the *sankin kotai* system described below, were quite legal and indeed mandatory.

Throughout the Edo period, each local feudal lord, or daimyo, was required by the Tokugawa government to spend one out of every two years in Edo (Tokyo), and to establish his family there. The less powerful among them were also occasionally forced to change domains. These measures were designed to keep the potentially powerful daimyo from becoming so wealthy or powerful that they could pose a threat to the central government. When the daimyo traveled, they did so in style, sporting their finest apparel as they moved along the main thoroughfares from their provinces to the capital. Local people gathered to watch the great processions and to compare the goods and attire of one lord with another. The daimyo brought their entire retinues with them, including artists and craftsmen, who were thus exposed to new fashions and techniques in the capital and who in turn brought new knowledge back to their own province or to the province to which their lord had been assigned. This was certainly one way in which new fashions and techniques were able to spread throughout the country fairly rapidly, and to appear successively in geographically seemingly unrelated areas.

Another factor previously underestimated is that many coastal provinces used sea routes much more than they used roads. Actual proximity and geographical proximity were not always the same. Mountain ranges bisect the country and sharply divided one region from another. These mountains are not only steep, lonely, and densely wooded but at that time harbored small groups of mountain bandits as well. Despite the dangers of sea travel, it was often both quicker and safer than an overland trip. It was no wonder that many provinces facing the sea developed better sea contacts with other coastal provinces, even those in distant parts of Japan, than they did overland contacts with their neighbors. A few Japanese scholars are also beginning to believe that, although the country was officially closed to foreign trade, some coastal provinces may well have quietly maintained old trade patterns with one or another Southeast Asian country. One of these scholars is Fukui Sadako (see note 12) who after spending ten years traveling throughout the countryside, examining old collections of cloth and local histories and talking to people, tentatively mapped out some of these old trade routes. Using general tendencies of regional kasuri design within Japan, she attempts to link specific areas in Southeast Asia with specific regions of Japan. It seems possible that a number of provinces maintained contact with one or another Southeast Asian country directly importing cloth and even technical knowledge from outside the country. Satsuma was probably not the only port through which kasuri cloth entered Japan, although it may well have been the first and was certainly one of the largest and most important.

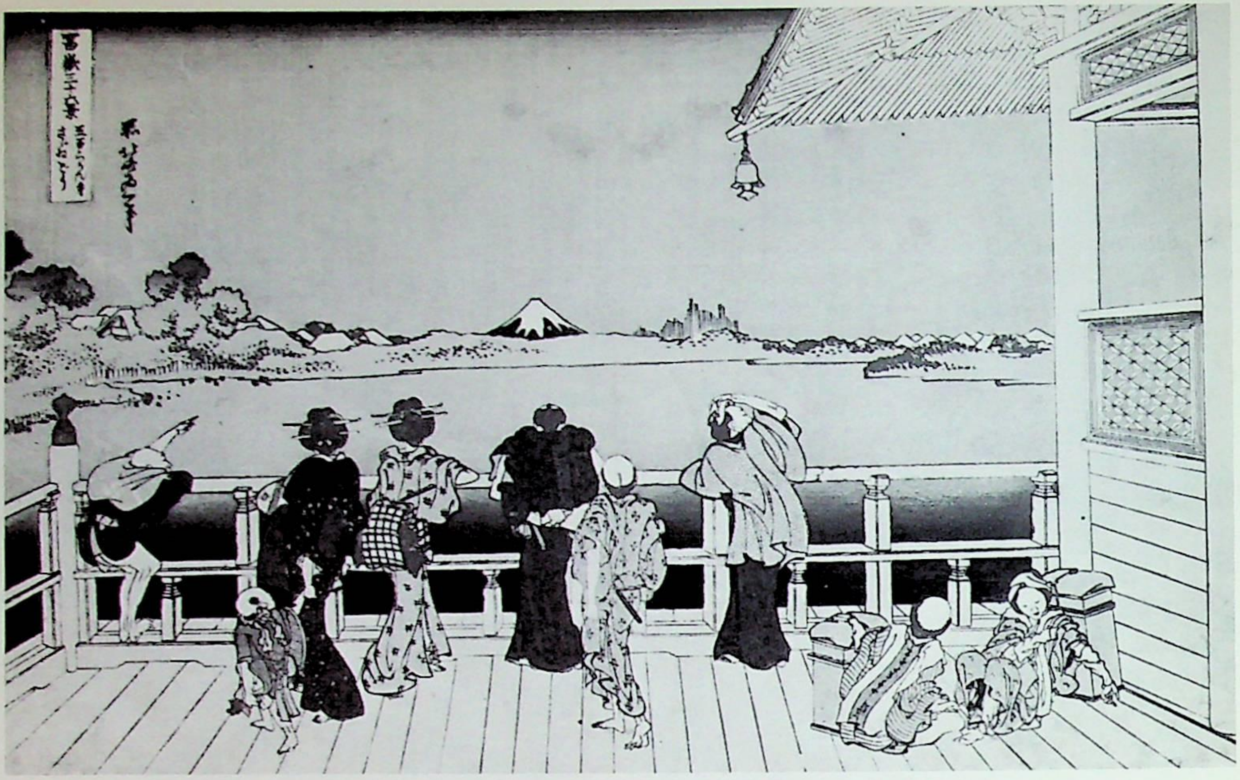


Fig. 7 Woodblock print by Hokusai Katsushika from the series "Thirty-Six Views of Mt. Fuji" showing merchant wives wearing fashionable *kasuri kosode* on an outing to admire the view of Mt. Fuji from the Gohyaku Rakan Temple. 18th century. Courtesy of the Smithsonian Institution, Freer Gallery of Art, Washington, D.C.

The mountainous and relatively poor province of Echigo on the Japan Sea is an example of a seemingly isolated spot that began to produce kasuri on its own and remains famous even today for these textiles. This province, on the "backside of Japan," apparently had long maintained independent marine contact with the Ryukyus, and its people probably learned kasuri techniques directly from this contact, in much the same way that the Ryukyuans had acquired them from their southern contacts many years before. The province also had well-established marine ties through the Inland Sea, lying between the main island of Honshu and the southern islands of Kyushu and Shikoku, with the important port and wholesale market of Osaka. Echigo was an agricultural area, snowbound many months of the year, and its people had for some time supplemented their meager agricultural incomes during the off-season by producing hemp cloth for the Osaka market. Although geographically isolated, they seem to have quickly realized the growing popularity of kasuri patterns in the towns, and early incorporated them in the hemp cloth they wove for sale to Osaka, Kyoto and later, as their fame spread, to Edo as well. Such commercial motivation, given the accessibility of water thoroughfares as well as overland routes may have contributed to the comparatively early development of kasuri in other surprisingly remote parts of the country as well.

From buke to shomin

It is difficult to trace in any detail the development of kasuri from its inception as a kosode textile for the high class buke families, through town merchant families (as evidenced by old prints and literary references Fig. 7), to the familiar blue and white kasuri so well known as a rural textile and so commonly seen in early twentieth century photographs of school children and their parents, university students, and flower vendors. Extant cloth and relevant documents are both rare, and exact dates difficult to determine, but it appears safe to say that at least by the mid-eighteenth century, when cotton was first available for the use of the common people, asa kasuri, dyed with indigo, was already known throughout most of the country.

The importance of the ready availability of cotton can hardly be overestimated. It was much cheaper and faster to produce than any of the bast fibers; this, combined with a generally stimulated market economy, led to a greatly increased demand for kasuri textiles by all classes of people. This demand produced a rapid increase in rural by-employment. By the end of the eighteenth century, many farm women were employed in various stages of cotton processing and weaving during the agricultural slack season, and cotton weaving had become a significant and integral part of the rural economy in many parts of the country. William Hauser has put it this way:

> Weaving skills became a marketable commodity in the Kinai region (around Osaka) as evident from the 1793 wage scales for female agricultural laborers in the Tayasu domain of Izumi. One of the primary components of salary rankings among female laborers was weaving ability. Skilled laborers were expected to be capable of all kinds of agricultural work and able to weave one tan of cloth per day in the off-season. The lowest ranking female laborers were expected to weave one-half tan of cloth daily and do various kinds of labor service.[14]

The increased flow of goods and money in the late Edo period also meant that even poor rural households could now afford to keep some of the kasuri cloth they manufactured, for their own use.

As demand continued, and the market flourished, specialization increased, and weavers in local communities banded together to work with and protect themselves against middlemen and wholesalers. Of the hemp weaving industry in Echigo, now a thriving commercial concern, Thomas Smith writes:

> Such was the scale of production that marketing of the finished product was organized nationally. Peasant weavers, whose numbers in Uonuma county alone apparently ran to many thousands, sold their cloth in three local markets that drew buyers from as far away as Kyoto and Osaka. Toward the end of the eighteenth century certain wholesale merchants were given a monopoly of purchase in these markets by the local lord. This measure, as was intended by its authors, worked to depress the producer's price, and at length the peasant weavers began banding together into small companies (nakama) to circumvent the prescriptive monopoly and ship their cloth directly to Edo.[15]

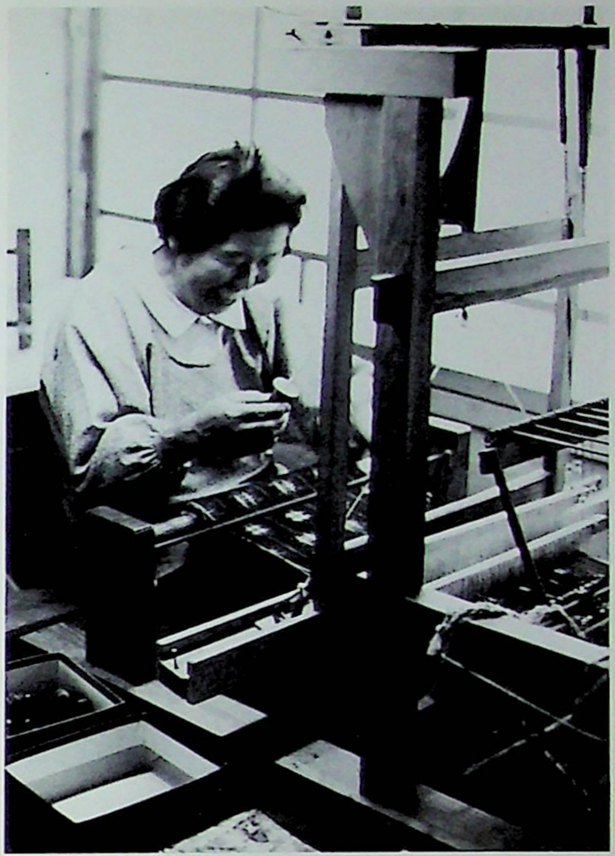


Fig. 8 Shin-san at her small fly-shuttle loom weaving cotton *kasuri* for women's farming costume. Although she is now the only experienced weaver in her tiny mountain village in Nara Prefecture, she well remembers the day when every household had a loom and every woman could weave.

In the Meiji period (1868-1912) small factories, using technical innovations such as Kokubo Kintaro's "kenten" foot-powered wrapping machine, grew up alongside older forms of by-employment household weaving. These small hand-industrial factories were in turn gradually replaced by increasingly modern equipment and organization. The factories, however, never completely eliminated or replaced the work of individual households for small-scale sale and for their own use. Some towns and cities still have small hand workshops that produce fine-quality kasuri textiles for sale to individual consumers and specialty stores throughout the country. Even today, in remote villages, there are a few weav-

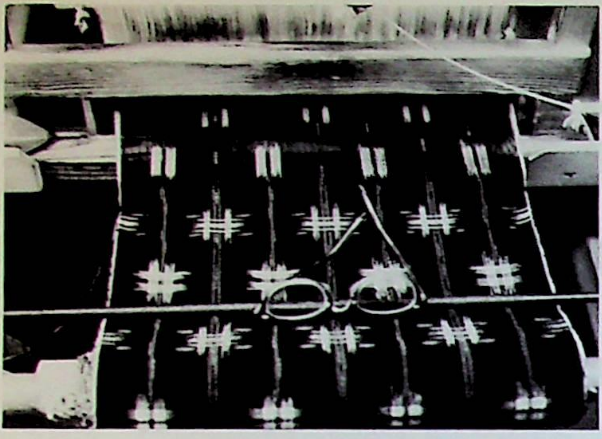


Fig. 9 An example of Shin-san's cotton indigo-dyed double *kasuri.* She buys machine-spun cotton yarns an hour's bus ride away in the town of Iga Ueno where people from her village have dealt for several generations. After it is tied, she sends it to an old indigo dyer in another village. The occasional small amounts of red yarns she uses, she buys factory-dyed in Iga Ueno. She ties all her own *kasuri* now, but when she was young, it was also possible to buy minutely-patterned pre-tied *kasuri* yarn and also hand-spun cotton. Neither of these is available now.

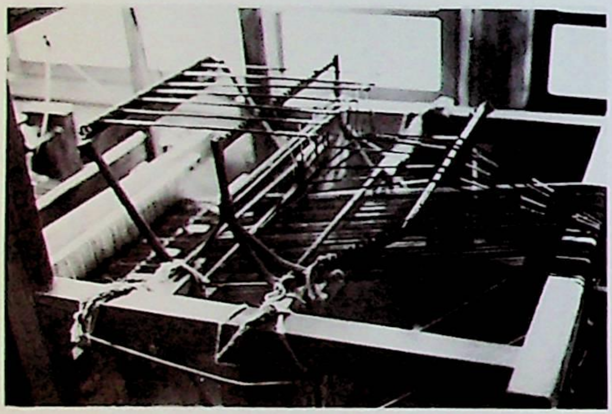


Fig. 10 The device Shin-san designed to slide *kasuri* warps into position and to adjust them during weaving. Notice the *kasuri* warp threads are not wound on the back beam but weighted separately and hung over the back of the loom.

ers who produce the cotton kasuri used in traditional-style farming costumes, for their own use and for sale to their neighbors. These women remember the days of their childhood, when every household in the village had a loom, and every woman could weave (Figs. 8-10).

Materials and Dyes

Until the middle of the eighteenth century, when cotton became commonly and easily available, almost all the kasuri produced in Japan was woven from bast fibers. After that time, cotton proliferated, and although asa kasuri weaving continued, the ease of spinning, warmth, and comparative low cost of cotton made it the preferred shomin material.

Asa

The word asa technically covers a wide range of fibers, including hemp, ramie, jute, linen, and other fiber-producing plants like the mulberry, wisteria, and nettle. Although the word has often been translated as linen, flax was not traditionally used in Japan, and the term generally refers either to hemp, a cultivated member of the mulberry family, or to ramie, originally a wild nettle. Before the introduction of cotton, any fiber other than silk was called asa, and cloth woven from it was called nuno.

Asa fibers are comparatively stiff and durable, and the cloth produced from them is cool and comfortable for summer wear, but provides little warmth in winter. The labor involved in preparing the fiber for spinning is difficult and time-consuming, and the fibers are among the most difficult to dye—more difficult than silk and other "animal" fibers, and even more so than cotton. Asa, however, has a strong affinity for indigo, and although it requires many dippings, it can be dyed with beautiful and lasting shades of light to deep blue.

Indigo

Over the great vermilion-painted bridge
across Katashiwa River
Hem of crimson skirt trailing
Wearing a robe dyed with mountain
indigo
A girl walks alone.[16]

This "mountain indigo" or *yami-ai* refers to *Mercurialis laiocarpa,* a form of indigo known in Japan from at least the third century, though whether it was used this early as a fermentation dye or even as an immersion dye, or merely rubbed on the fabric, is still unclear. The use of yama-ai continued even after the introduction from China a few centuries later of the more common *Plygonium tinctorium,* seeds of which have recently been discovered at Nagaoka, site of the capital for a few brief years in the late eighth century. The basic indigo dyeing process was well known in the Nara period, and has continued relatively unchanged from that time. By this technique (in which material is dipped, aired for the all-important oxidization process, and redipped in a succession of vats of fermented indigo until the desired depth of color is obtained) Japanese asa and, later, cotton kasuri were dyed.

Indigo produces a series of beautiful shades of blue, from a rather light, clear blue (*ai*) to a very deep blue-black (*kon*), but not for its beauty alone was it so extensively used throughout Japan. Japan lies further north than Okinawa and lacks its rich palette of natural dyes. Although color was cherished and dyes imported and cultivated from early times, the palette available and permitted to all but the elite was fairly restricted. Indigo is one of the oldest and most satisfactory of Japanese dye materials, and one which, when used properly, strengthens the fiber it dyes. Its smell is also said to repel the snakes lurking in wet rice fields. Asa and cotton, though not easily colored, both dye very well in indigo. For all these reasons, indigo was the most common dye material used by ordinary people. Many towns and even villages had a professional indigo dyer, who sometimes kept over thirty working vats; yarn that was prepared at home for plain or kasuri weaving was brought to him to be dyed. The late eighteenth century switch from asa to cotton as the primary kasuri material did not change this pattern and indigo dyers may still be found in some rural towns today.

Cotton

Cotton was not native to Japan. Brought from India, it was first cultivated in south China in the seventh century, in central China in the ninth, and in Korea in the latter half of the fourteenth. During the Onin War (1467-77), a large quantity of cotton cloth was imported from Korea and used by the daimyo for military purposes—for *jinmaku* (a kind of curtain-tent), flags, and especially for military clothing. After the introduction of firearms by the Portuguese in 1543, it was used for fuses as well. For these purposes cotton was quite superior to asa and soon, in an effort to start the production of cotton in their own domains, some daimyo apparently hired *wako*, or privateers, not only to steal Korean cotton but to abduct Korean cotton farmers as well.

It is not easy to grow cotton in Japan, but the fiber is so superior to asa in warmth, ease of dyeing, and speed of spinning that no efforts were spared in the attempt to establish the plant. By the middle to latter part of the Edo period, cotton cultivation had spread throughout the country, except for the northern regions of Tohoku (northern Honshu) and Hokkaido, which were too cold for it. By this period, cotton was apparently available to all classes of people.

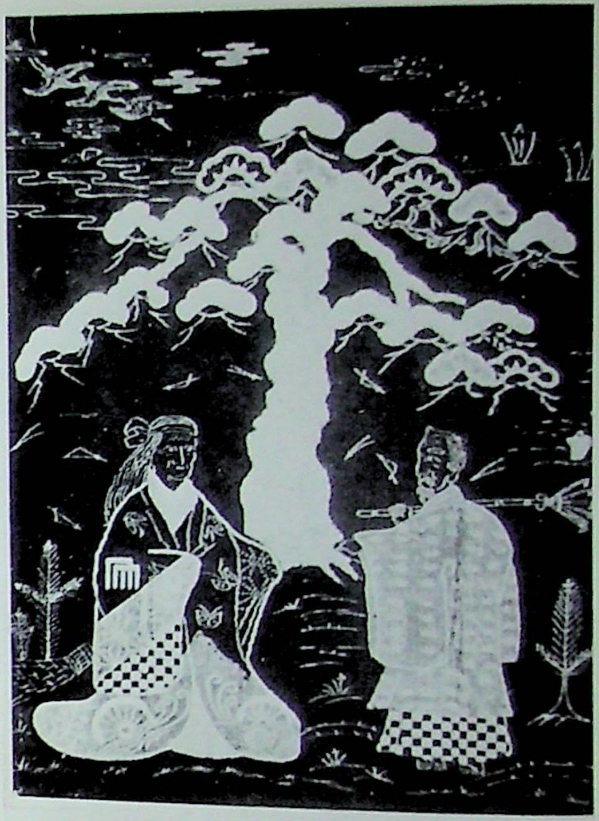


Fig. 11 *E-gasuri* from Kurume, an area famous for "picture *kasuri*." *Futon* (bedquilt) cover. Indigo background. Cotton. Double ikat. Late Meiji period. Private collection, Kurume, Kyushu.

The introduction of cotton radically altered the lives and dress of the common people. Its comparative warmth was welcome to a people whose clothing, even in the dead of winter, had been woven only of asa fibers. The comparative speed with which it was possible to spin cotton thread (at least four times as much cotton could be spun in a day as asa) and subsequent low cost of the finished textile not only offered obvious immediate advantages, but also greatly stimulated the production of excellent kasuri-patterned textiles. These textiles were designed for a new market—that of ordinary merchants, townspeople, and farmers who, perhaps for the first time, could afford a certain style in their clothing, and who were forbidden by a multitude of sumptuary laws from aspiring to the silks, complex weaves, and gay colors worn by their "betters."

Many of the new kasuri patterns were modeled on old asa kasuri motifs rooted in a Ryukyuan past. Others were designed to work in combination with stripes and checks inspired by the popular striped cotton imports from Saõ Tomé and Bengal. Still others developed and expanded the pictorial style of the old haba-awase bird and flower patterns, to depict felicitous motifs such as the crane and tortoise and even whole landscapes. There were enough similarities among these local kasuri traditions that they were immediately recognizable as Japanese (Fig. 11); at the same time local tastes and sensibilities, the influence of a particular import or of an outstanding local weaver, all contributed to the creation of bodies of textiles so distinctive that it is often possible to place them immediately, not only by region, but even by township as well.

KASURI TECHNIQUES AND TECHNICAL INNOVATIONS

While the production of hand-tied cotton kasuri continued to grow, the desire to produce ever more complicated patterns fostered the development of a number of techniques to facilitate the increasingly complex calculations. The growth of the market economy and concomitant demand for textiles stimulated the development of other techniques designed to shorten the time required for their production.

Although ikat is known throughout the world, and although a number of countries produce extremely elaborate and exquisite ikat textiles, the variety of techniques for production developed in Japan in the last century and a half would seem to be unequaled. Following is a list and short description of those pre-industrial techniques that have been used in Japan in the production of kasuri textiles. Most of them, of course, are related to the resist process and most, with the exception of hand-tying, were developed during the first half of the nineteenth century. These methods all developed out of the experience and insight that local people brought to their work, and one can often see a close interplay between a given pattern, the invention or introduction of a new device, and the influence of that device or technique on subsequent pattern development.

Tegukuri: hand-tying of warp and/or weft yarns. This is a common technique, known throughout the world, and was the oldest and most common method in Japan at least until the end of the Edo period. Portions of the warp and/or weft yarn to be resisted from the dye in order to create the predetermined pattern, were carefully calculated, measured, and then tightly tied with *kozo*, the outer skin of a variety of hemp. Kozo was used because it is strong and tends to tighten when wet, thus ensuring a tight bind inhibiting the stray penetration of dye at the edges of the pattern areas. A variety of tying materials are used by contemporary weavers. Some use medium weight clear plastic bagging, or tape, cut into long strips and wound lengthwise around the area to be tied, securing this with itself or with small strands of cotton thread wrapped tightly at intervals on top. Others wrap with a combination of paper and string, and recently some have started to use strips of rubber such as the inner tube of a bicycle tire. The latter is easy to wrap and unwrap (the unwrapping of kasuri can take almost as much time as the original tying), but some weavers complain that it adversely affects the "feel" of the fibers underneath.

Hikizurashi: slide-pulling. Yarns can be either hand-tied to produce small changes in pattern, or can be tied more regularly and then "slide-pulled" into place during the setting up of the warp on the loom. The warp can be slid in a comparatively rough fashion by adjusting the lengths of warp ends by hand as one rolls

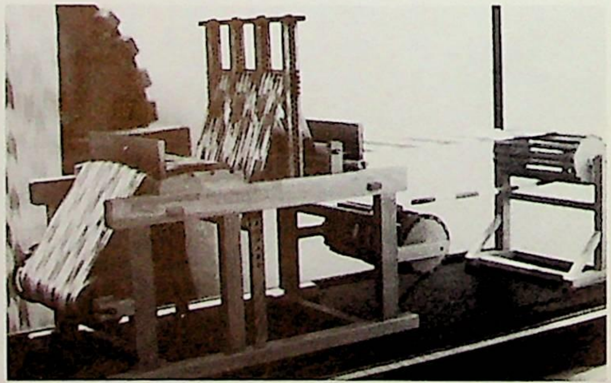


Fig. 12 A Nishijin-style *Mokuhiki* or device for slide-pulling a block-dyed warp into the desired pattern of arrows, checks, etc. Demonstration Hall, Kyoto Sangyo Kaikan.

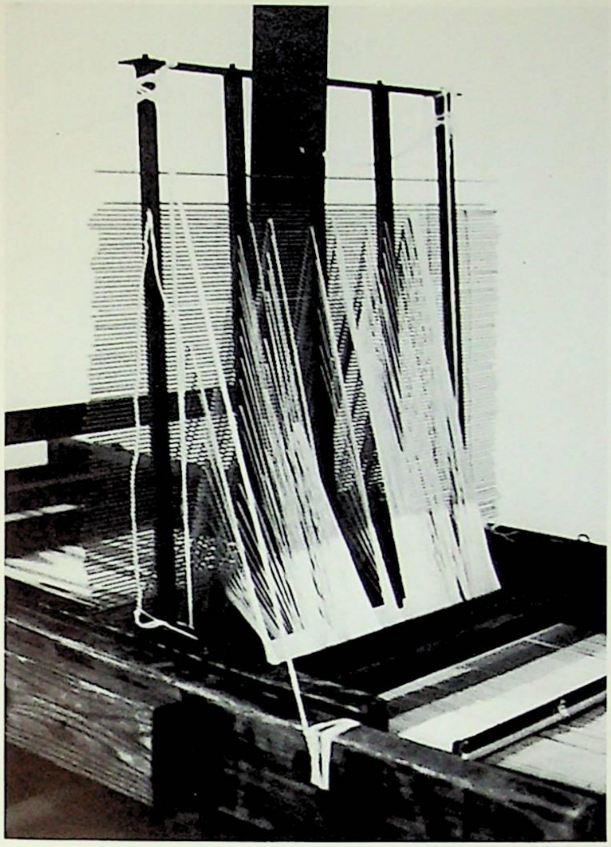


Fig. 13 Detail of the *Mokuhiki* ladder which allows for minute adjustments of the *kasuri* warp yarns during the process of winding on the back beam.

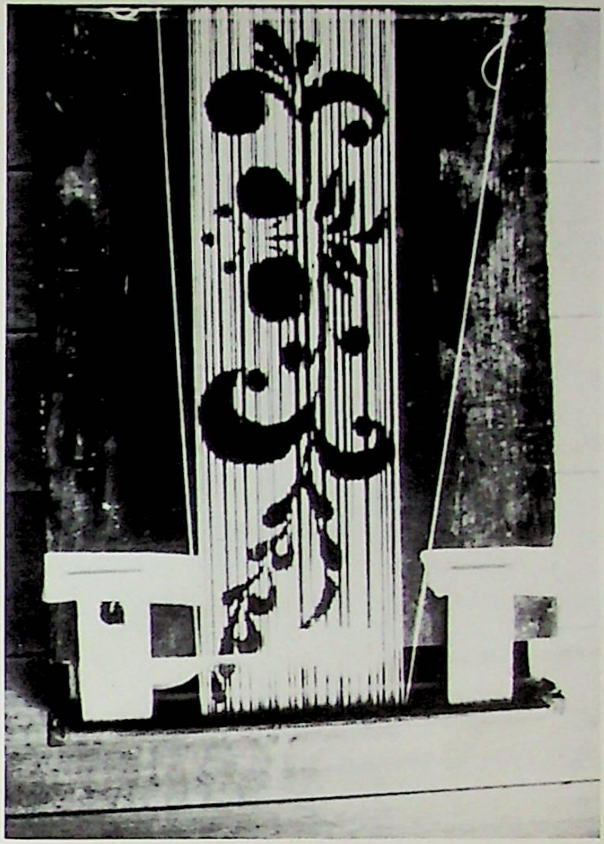


Fig. 14 *E-dai.* This "picture stand" is used to mark a *tane-ito*, or guide thread, with the desired weft *kasuri* pattern. The *tane-ito* is then wound on a large warping board with the true weft and used as a guide in tying sections of the yarn to be reserved from the dye. The pattern is often, as it was here, transferred to the *tane-ito* through a paper stencil with *sumi* ink. Kurayoshi, Tottori Prefecture.

onto the back beam, or by using some simple device such as pre-threading the harnesses and raising certain ones as one rolls. However most *hikizurashi* done in Japan today uses a device often called a *mokuhiki,* that, in its most elaborate form, such as the ones developed and used in the Nishijin weaving center in Kyoto, allow for the minute adjustment of each of over a thousand warp threads as they are wound onto the back beam. Others are comparatively small, simple devices that fit on the back of the loom and are used either in the rolling process or merely to perfect the adjustment during weaving. (see Fig. 10)

The Nishijin *mokuhiki* is a rectangular wooden horizontal stand. (Figs. 12 and 13) The back beam of the loom fits on one end in much the same fashion as on the loom. Two upright metal pieces about two to three feet high with slots in them like a reed fit on either side. Metal or wooden cross pieces are then fitted between them,. the slots allowing for minute adjustments of height. (Imagine a reed placed on its end but wide enough to accommodate a whole warp in that position.) The warp is first put through an open-topped reed on the front of the stand, then through a series of rollers, then selectively let run straight to the back beam or put over one of the many possible vertical bars resting on the slots of the reed-like vertical apparatuses at the sides. As the warp is wound on the back beam obviously the pattern will slide and the sliding can be rather elaborately and carefully controlled. The back beam is then removed and placed in position on the loom and the warp set up as usual.

Haba-awase: adjusting the width. Weft sliding is much simpler, as the weft is tied in such a way as to allow for extra take-up and the yarn is then merely slid into the desired position with the extra yarn left in a loop at the selvage. Thus a hunk of weft yarns tied in one bunch which would, if woven out straight, produce a regular rectangular pattern, can be pulled to an oblique line, an arrow-shape, a bird, or a flower.

E-dai: picture stand. A specially prepared "guide" or "mother" thread (*tane ito*, often rather heavy cotton) is stretched on an *e-dai* (or *osa-dai*—reed stand, *ezu-dai, tane ito dai, sumi ito dai*) which normally consists of a wooden frame with a bamboo comb (*osa*) on either side (an open-topped reed). The distance between the reeds is equal to the length of the weft yarn required to weave one row of the fabric (i.e. width of the finished fabric plus weaving take-up). The pattern is then painted on the threads with a brush and india ink following the design printed or drawn on the *e-dai* or with the aid of a paper stencil (*katagami*) placed above the tane-ito as it forms a false weft face on the e-dai (Fig. 14). The tane-ito is then stretched out—often on a large warping frame—as a guide for tying weft yarns for the textile. This technique is most commonly used to measure and tie weft yarns, but occasionally is used for warp yarns as well. The method allows complex patterns and has been used in places such as Kurume in Kyushu and Kurayoshi and Hirose in Tottori and Shimane Prefectures, respectively, to produce the fine complex patterned *e-gasuri* (picture kasuri) for which these places are so well known.

Koba-jogi: The basic principle of the *koba-jogi* is the same as that of the osa-dai. *Koba*, or very thin boards of paulownia, are piled up and turned on edge with each thickness the same as the diameter of each weft. A pattern is printed or drawn on it and the weft yarn is then dyed (or rubbed with pigment) using the numbered koba as a measure.

surikomi: (*kashiri*). Yarns are not tied but are rubbed with pigment or thickened dye.

orijime: The weft yarns are woven with thick, disposable warps (straw or cotton) into a fabric which is dyed and then taken apart. The weft yarns, undyed where they were covered by the warps, are subsequently woven with new warps into the final fabric. This method can be modified to produce kasuri warp yarns as well, and has been most highly developed on the island of Amami Oshima to produce the elaborate spun silk textiles described in the section on Okinawa.

itajime: Yarns are pressed tightly between two boards engraved on high relief with the required design. Dye is then either poured or sprayed into the grooves through holes in the surface, or the boards are totally immersed in dye liquor, which cannot penetrate to the points under pressure. If the pattern is multicolored, grooves can be selectively filled with wax to allow a more complicated resist process.

The *itajime* was first introduced from China in the Asuka-Nara period but was used at that time to dye finished fabric (*kyokechi*). Some very fine examples of textiles dyed in this fashion remain in the Shosoin. It gradually fell into disuse but was either revived or, more probably perhaps, re-invented in 1837 by Miura Tomoshichi in Yamato (near Nara) as a method for resist dyeing warps. The method is well suited for volume production, and the subsequent invention or introduction of the itajime in Omi (by Koroda Shinzo of Takamiya in 1850) is said to have increased the daily production of one man 20 times. The initial cost of the *ita* and its carving was high, but, once made, it could be used any number of times and so was suited to the volume production desirable in an active market economy. Viscous dyes such as indigo do not run well through the grooves of the itajime, and yet if the apparatus remained too long in the dye bath, the edges were likely to fuzz to an undesirable extent (a characteristic of the itajime is its comparative "hard" edges). As Yamato kasuri developed largely in accord with the use and development of the itajime, its patterns also developed in a way compatible with the itajime's peculiar characteristics and Yamato is now famous for its rather unusual white background kasuri with middle-sized indigo blue patterns.

After its initial development as a device for warp kasuri, it was modified to produce weft kasuri and in 1839 Ohtsuka Taizo of Kurume is said to have started producing weft e-gasuri on the itajime. This perhaps marked the beginning of the rapid development of Kurume e-gasuri in the mid-nineteenth century and it was not long before the itajime was being used in many other kasuri producing areas of the country as well.

kushi-oshi/ "roll" nasen: Both of these are hand-printing methods. Yarns (generally warp) are measured and stretched out to the required length, width and number of threads/

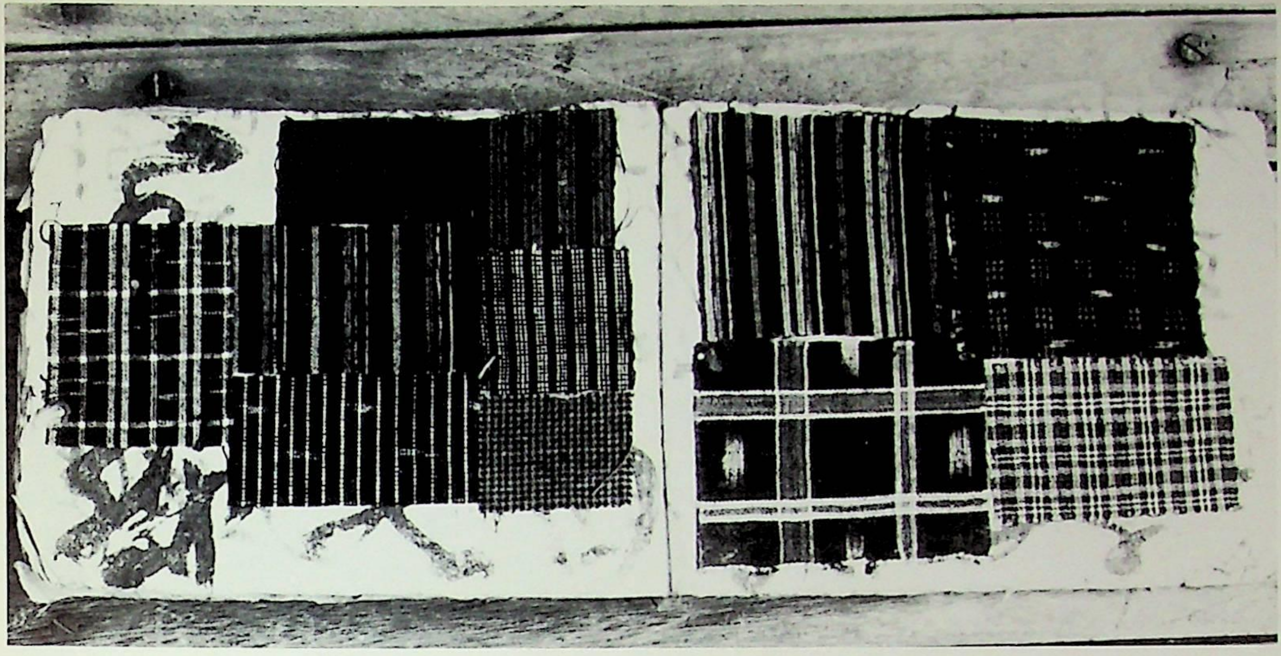


Fig. 15 A page from an old *Shima-cho*, a weaver's hand-made book of swatches pasted on old paper. These samples are almost exclusively indigo-dyed cotton and include patterns of stripes, checks, warp and weft *kasuri*. Collection of Takimoto Takako.

centimeter of the finished fabric and then hand-printed. *kushi-oshi* uses a tool which has many grooves on it and resembles a comb (*kushi*). "roll nasen" (*nasen* = printing) is printed with a wooden roller.

hogushi: A false fabric is woven generally using the true warps and widely spaced disposable wefts. This fabric is then printed (it may be either directly printed or discharge printed), taken apart and the warp yarns then reused with new wefts.

random techniques: These include processes which are quite difficult to control such as dipping part of a skein of yarn into the dye liquor (called *fukiyose* or "drifting" kasuri) or dyeing all, or part, of a twisted or braided hunk of yarns (*bokashi, somewake* kasuri) which are later disassembled and woven into the finished cloth.

industrial production: The kasuri textiles mass-produced today are made with the same advanced technology used for the weaving and dyeing of other textiles, but dyeing and printing processes are applied to the warp or weft yarns before weaving rather than to the finished fabric after it is woven. Thus yarns are printed from blueprints, dyed with spray guns, woven on power looms, etc.[17]

While the technical innovations of the nineteenth century seem to have been spurred largely by a desire to produce ever finer, more accurate and more complex patterns, the beginning of the twentieth century brought a great increase in volume production, made possible by the invention of such devices as Kokubo Kintaro's foot-powered wrapping machine, invented in Kurume in 1909. This "kenten" could freely change the length and frequency of resisted portions and wrap several sections at once. It was followed by several other such devices which with concurrent loom developments and the introduction of commercial chemical dyes (originally from Germany) served to speed the kasuri process until today, in large textile plants, kasuri yarns are printed from blueprints with the same modern technology used for finished fabrics and, of course, are woven on power looms and dyed mostly with chemical dyes.

With the exception of the e-dai, most of the techniques developed in the nineteenth and early twentieth centuries have fallen into disuse or been taken over by modern industrial processes. While modern technology is capable of great virtuosity, and one sees rare examples of excellence, it is again among the weavers who hand-tie their yarns that one finds both those who preserve the fine old traditions and those who create the most innovative and original textiles.

KASURI—AN ORAL AND WOVEN LEGEND

Since cotton kasuri was common people's clothing, it was used to the bitter end, patched and repatched. The freshly woven cloth started as clothing or as the cover for especially fine *futon* (bedding). As it wore out, it was cut down and patched, used for older futon and for children's clothing. Finally it was folded, stitched for strength, and used as scrub cloths. Most of these textiles have long since worn out, and if there ever were any records of them, these have also disappeared. The few contemporary wholesalers' records deal primarily with figures, and even when they mention kasuri textiles tell us nothing of the techniques employed and give little if any clue to design motifs. Sketchy local histories of weaving and dyeing—often a mixture of legend and fact—help to piece together the history and development of kasuri weaving in a given area, particularly if they are supplemented by a small local collection of old cloth. The best sources of information, however, are old pattern books.

These swatch books or *shimacho* (literally "stripe book") were hand-sewn folios of used paper, often children's copy paper, on which were pasted samples of cloth woven by the owner of the book and by her friends (Fig. 15). In the San-in region, women gathered for the short annual cotton harvest. They were housed together in temporary lodgings, and in the evening after the work in the fields was done, they traded samples of the cloth they had woven during the year from the cotton they had received as their wages from the last year's harvest. Most women, however, stayed a bit closer to home, and their swatch books reflect only their own work and that of their immediate neighbors. Among a class of people who generally could not read, the *shimacho* (and drawn pattern books) served as weaving instructions, both for the weaver herself and for her daughters. Today they are an invaluable historical source of information about kasuri patterns and design motifs, and collectively may be said to represent a fairly complete catalogue of hand-tied kasuri textiles, striped textiles, and the large number of textiles that combined these two techniques.

By the latter half of the Edo period, the roots of kasuri weaving were so deep in Japanese soil that its southern origins were all but forgotten, and there had developed many local legends concerning its discovery or invention. Kurume honors the weaver Den Inoue with the invention of kasuri toward the end of the eighteenth century. One day, it is said, she noticed that at the points of interlacement, the yarns of her indigo-blue kimono were a lighter color. Legend has it that she then figured out a method of selectively resist-dyeing the yarns in order to produce a predetermined pattern. Matsuyama, the capital of Ehime, honors Kagiya Kana for the same invention (supposedly in 1802). Ojiya (in Echigo) traces its heritage to the introduction of kasuri techniques by the *ronin* (masterless samurai) Horijiyo Masatoshi when he journeyed there. Other places have their own legends about local weavers who are said to have invented the technique. Whatever their basis in fact, these legends are a tribute to kasuri and attest to the respect accorded the weavers who produced it, and the extent to which it had become a truly indigenous Japanese textile.

It would be impossible here to mention all the kasuri design motifs and overall patterns developed throughout the country. The hundreds of patterns consist of simple mottlings of color in a plain ground (similar to the resist-cloth kasuri of Ryukyu), abstract geometric motifs, and pictorial representations of grasses, trees, flowers, birds, insects, and animals, as well as the non-repeat complex pictures and landscapes of the e-gasuri of Kurume and Kurayoshi (Figs. 16-21). Overall, this work displays an impressive understanding of the technique by the weavers. In some pieces single and double kasuri are used skillfully together to "shade" the images or to give a three-dimensional effect, as of a bird or animal crossing over or behind a grid. Seldom does one see a textile design that really does not "work," whether it is naive and even a bit clumsy, or sophisticated and technically complicated. Kasuri has a rich and varied tradition indeed.

Having enumerated the difficulties of trying to trace the history of a textile that was used until it was completely worn out, and about which there are so few existing records, Oda Hideo concludes his lead article in the comprehensive "kasuri" edition of *Senshoku to Seikatsu* by honoring the farmers and particularly farm women of Japan who were so greatly responsible for the development of

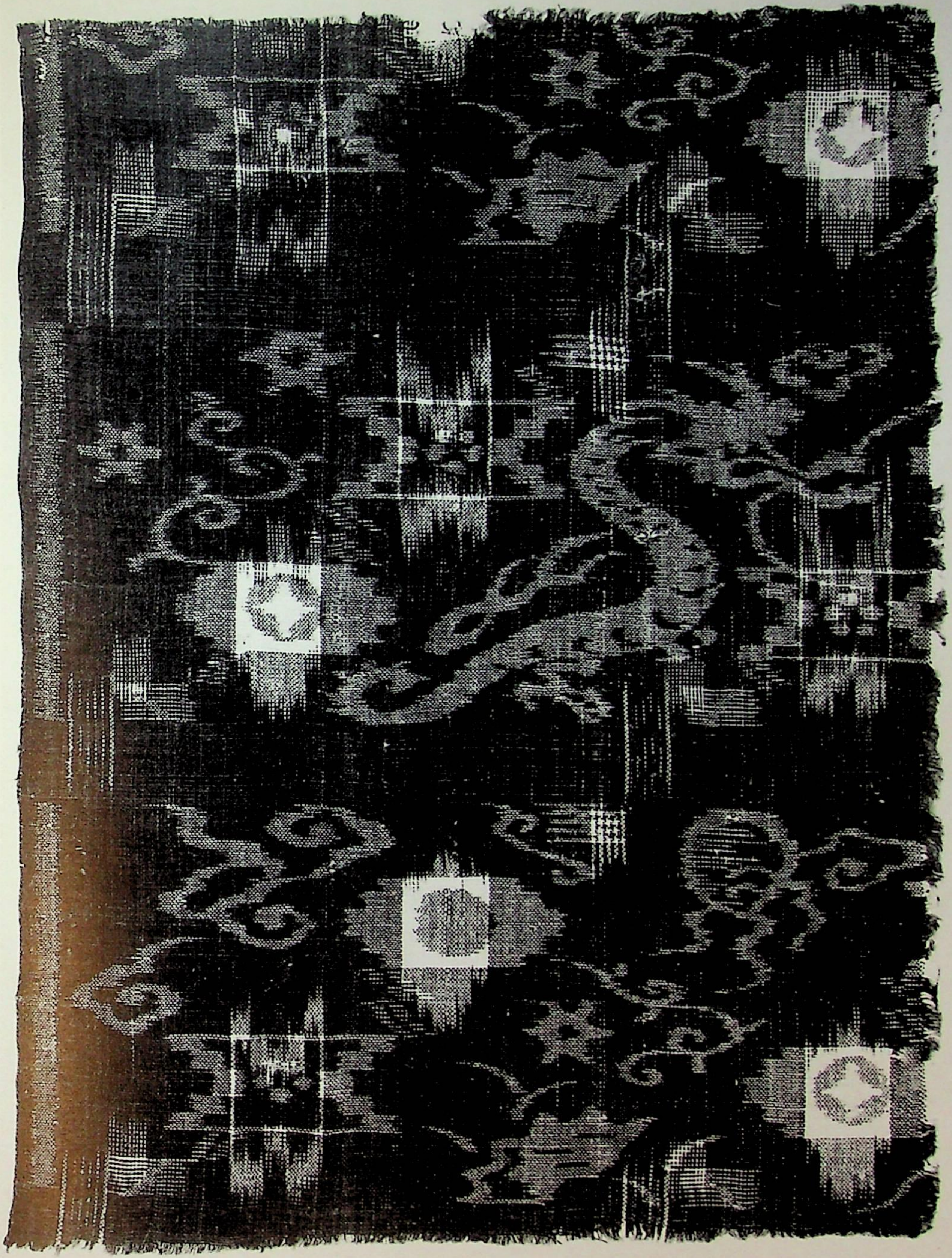


Fig. 16 *E-gasuri. Asa.* Double ikat. Indigo background. 19th century. Textile Museum, 52.23, Gift of Jaap Langewis, 1956.

both asa and cotton kasuri, and for many if not most of its design motifs. His comments are translated here not only as a tribute to a man who has spent much time researching this body of textiles, but as an articulate expression of the sentiments of many men and women who deeply appreciate the fine and beautiful work of these farm women, produced in the midst of a life of hard physical labor, poverty and, often, of suffering as well.

> But problems of history aside, the *kasuri* remaining today is lovely, and perhaps it is enough that we can gain a feeling for the sense of beauty of the farm women of Japan who nurtured and matured this beautiful cotton *kasuri*. Farmers were at the bottom of society—oppressed by the ruling aristocracy and treated little better than worms, but Japan is a country beautiful for the changes of the four seasons, and farmers were also the people most sensitive to the subtleties of these changes. Their sense of beauty was not the sophisticated sense of the educated or "cultivated," but the vital sense of those close to the earth. The vitality of this sense of beauty jolts us to the roots of our being. Theirs indeed is true culture. Those who "raised" this *kasuri* would laugh at us for saying such things, but I will just humbly say thank you—and lay down my pen.[18]

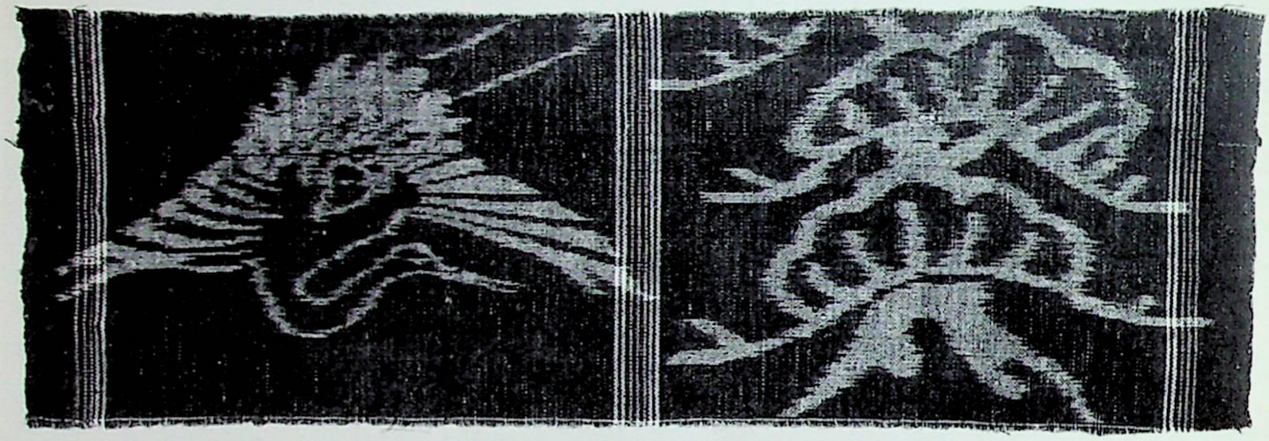


Fig. 17 *E-gasuri* (weft only) showing the common felicitous motifs of the crane and pine tree. Cotton. Indigo background. 19th century. Textile Museum, 52.24, Gift of Jaap Langewis, 1956.

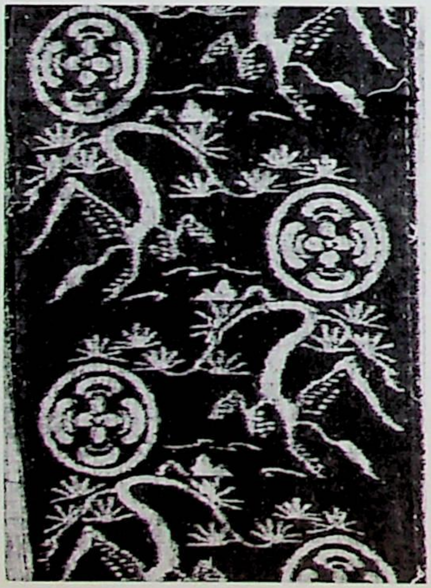


Fig. 18 *E-gasuri*. Weft. Cotton. Indigo background. Author's collection.

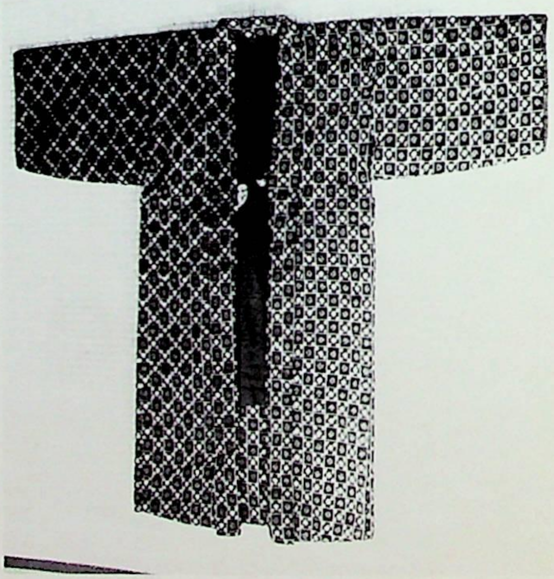


Fig. 19 Infant's padded kimono. Cotton. Double ikat. Indigo background. Author's collection.

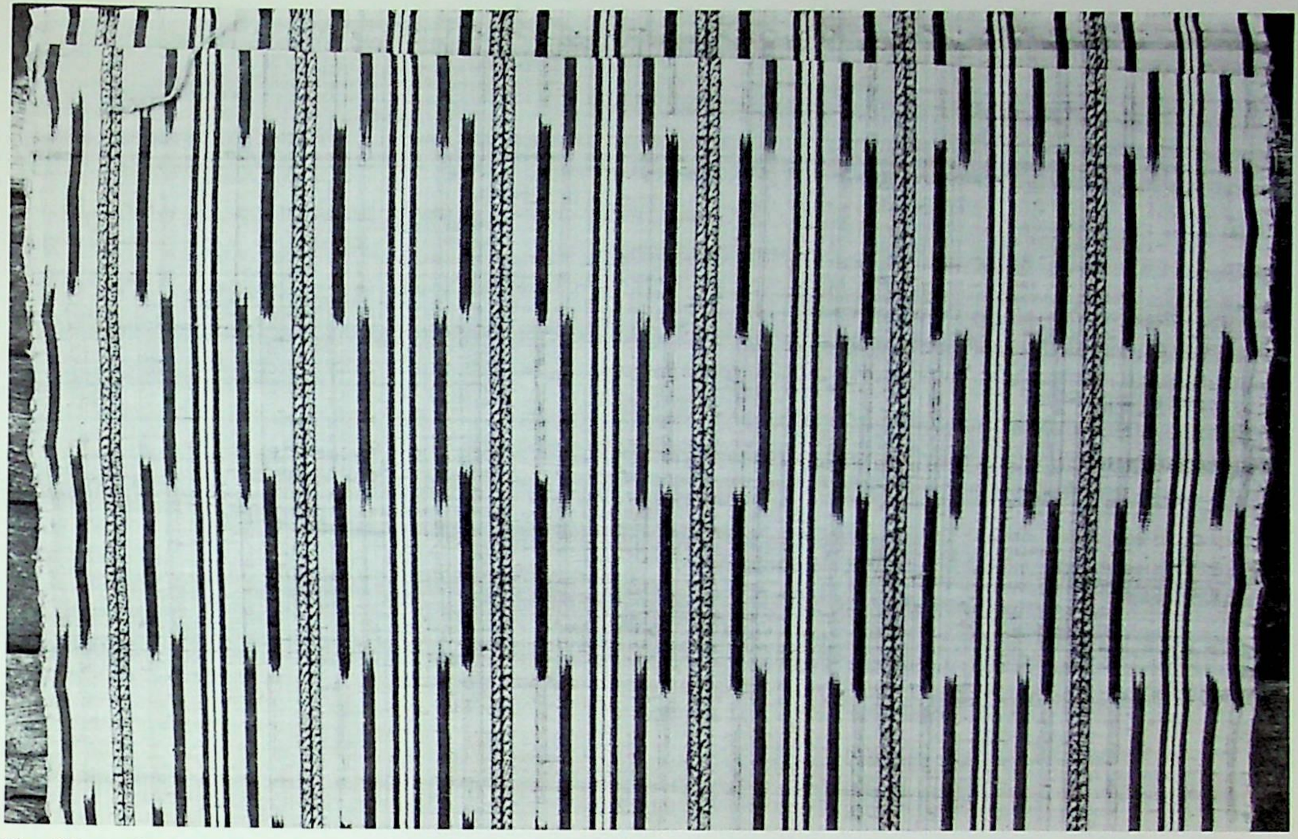


Fig. 20 Contemporary warp *kasuri*. Light, clear colors on a reserved ground. Silk. Woven by Takimoto Takako.

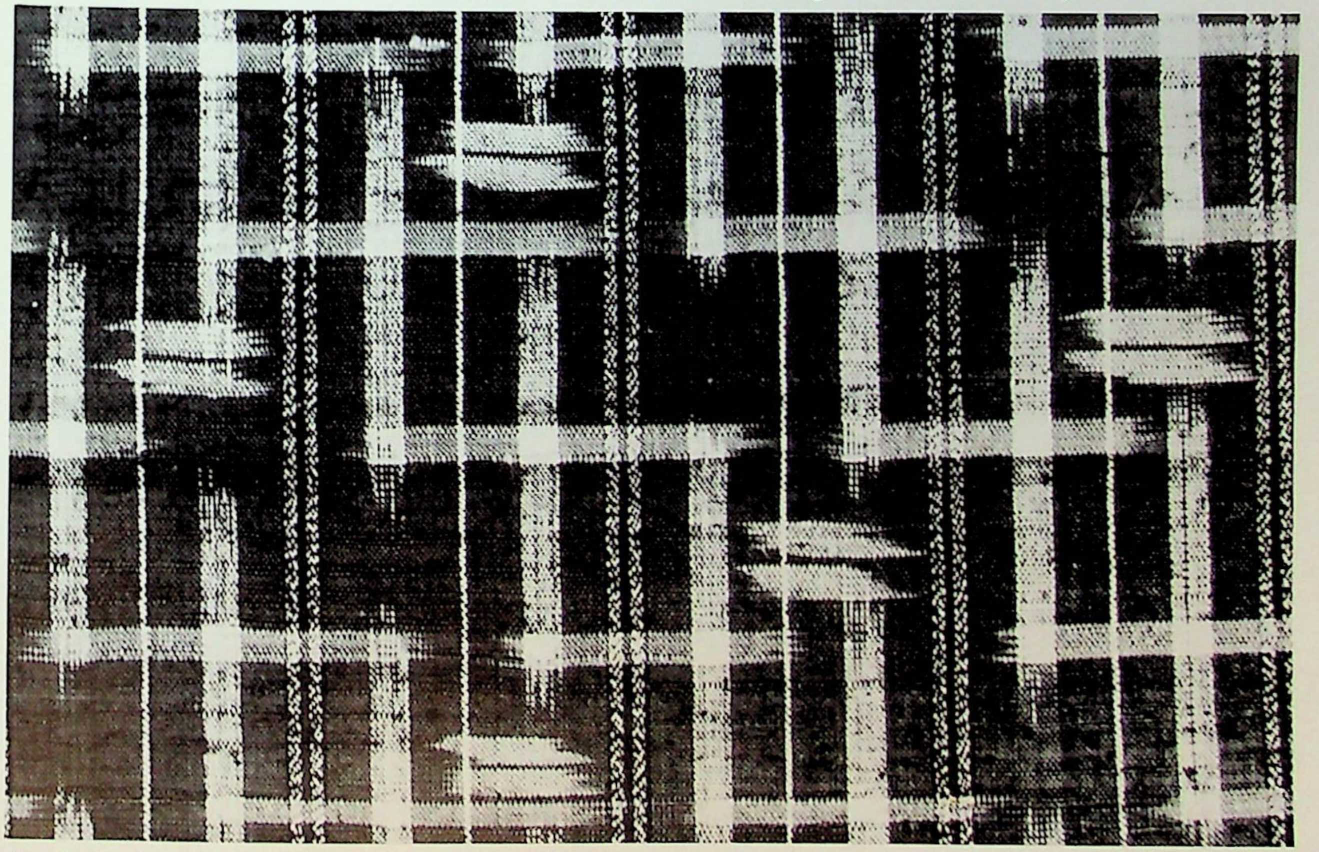


Fig. 21 Typical *kasuri* patterns for cloth to be used for clothing. Double ikat. Cotton. Indigo background. Author's collection.

NOTES

1. Japanese names are given in Japanese order, that is with the last name first followed by given name.

2. Yamanobe, Tomoyuki, in Okada, Jo, ed., *Tokyo Kokuritsu Hakubutsukan, Horyuji Kenno Homotsu,* Kodansha, Tokyo, 1966.

3. Carl Schuster, "Remarks on the Design of an Early Ikat Textile in Japan," in *Festschrift Alfred Bühler Basel,* 1962, pp. 339–374. For another discussion of this textile, mention of the pottery finds and general information about Turkestan and Southeast Asian ikats see Larsen, Buhler and Solyom, *The Dyer's Art,* Van Nostrand Reinhold, N.Y., 1976.

4. Tanaka, Toshio, *Okinawa Orimono Kireji no Kenkyu,* as quoted in Oda, Hideo, "Kasuri Gijutsu no Keifu" in *Senshoku to Seikatsu,* summer 1974. Tanaka's book was written after many years of research on Okinawan textiles and is an excellent and standard work on the subject.

5. Ono, Akira, *Honpo Momen Kigyo Seiritsu no Kattei,* in Oda Hideo, *op. cit.*; also *Textile Designs of Japan,* Japan Textile Color Design Center, Osaka, 1959–1961. The latter is a three volume series on Japanese Textile Designs: I) Designs composed mainly in free style, II) Designs composed mainly in geometric arrangement, III) Designs of Ryukyu, Ainu and Foreign Textiles. Volume III includes primarily the textiles in the Shosoin Repository in Nara. Each volume includes many excellent reproductions of designs as well as good historical and technical information.

6. Hokama, Seiko, "Handicrafts in Okinawa," catalogue for an exhibition at the National Museum of Modern Art, Kyoto, fall, 1974.

7. For further information on this textile and its production see Douglas Haring, "Tsumugi," *Craft Horizons,* XXII, no. 5, Sept/Oct, 1962, pp. 34–37.

8. *Textile Designs of Japan, op. cit.,* p. 16.

9. Kamakura, Yoshitaro, "Okinawan History and Handicrafts," in *Craft Treasures of Okinawa,* National Museum of Modern Art, Kyoto, trans. and adapted by Erika Kaneko, Kodansha International, Tokyo, New York and San Francisco, 1978.

10. Jaap Langewis, "Japanese Ikat Textiles" in *Kultuurpatronen,* Vol. 5/6, 1963, pp. 40–83. A useful and pioneering essay in the field, though now a little dated.

11. Oda Hideo has devoted years to the study of *kasuri* weaving. He was chosen to write the lead article in the excellent summer 1974 issue on indigo-dyed *kasuri* of the quarterly textile journal, *Senshoku to Seikatsu.* He has also written a book on *E-gasuri,* published by Sansai-Sha, Tokyo, 1966.

12. Fukui Sadako's book, *Nihon no Kasuri Bunka Shi,* Kyoto Shoin, Kyoto, 1973, is probably the best single volume on the history, patterns and techniques of *kasuri* weaving.

13. Oda, Hideo, *op. cit.,* p. 33.

14. William Hauser, "The Kinai Cotton Trade," in *The Journal of Asiatic Studies,* Vol. XXXIII, no. 4, August 1974, pp. 637–638.

15. Thomas C. Smith, *The Agrarian Origins of Modern Japan,* Stanford University Press, Stanford, 1959, p. 77.

16. A poem from *Manyoshu* [#658–9 ix:1742–3)], a collection of poems from the 7th and 8th centuries. This translation is from Noma, Seiroku, trans. Nikovskis Armins, *Japanese Costume and Textile Arts,* Heibonsha Survey of Japanese Art, Weatherhill/Heibonsha, N.Y., Tokyo, 1974, p. 160.

17. A brief, but informative, article on processes and techniques appeared in the summer 1974 issue of the Japanese textile quarterly *Senshoku to Seikatsu,* from which some of the information in this section was adapted.

18. Oda, Hideo, *op. cit.,* p. 37.

ACKNOWLEDGMENTS

I would like to express my deep appreciation to Takimoto Takako and her apprentices, to my teachers at the Kyoto Municipal College of Art, and to Hiroi Nobuko and Asano Tomoe for the help they gave me in studying kasuri weaving and its history; also to Joanne Brandford, Brooke Stevens, Tom McCorkle and Pat Hickman for their criticisms and encouragement. I would also like to thank Milton Sonday of the Cooper-Hewitt Museum in New York for his careful reading of the final manuscript. Unless otherwise specified, translations are my own.